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OECD Economic Surveys: Slovak Republic 2024



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Foreword

This Survey is published on the responsibility of the Economic and Development Review Committee of the OECD, which is charged with the examination of the economic situation of member countries.

The economic situation and policies of the Slovak Republic were reviewed by the Committee on 5 December 2023. The draft report was then revised in light of the discussions and given final approval as the agreed report of the whole Committee on 12 February 2024.

The Secretariat's draft report was prepared for the Committee by Oliver Röhn and Federica De Pace under the supervision of Mame Fatou Diagne. Research assistance was provided by Federico Giovannelli and editorial support by Robin Houng Lee.

The previous Survey of the Slovak Republic was issued in January 2022. Information about the latest as well as previous Surveys and more information about how Surveys are prepared is available at http://www.oecd.org/eco/surveys



Table of contents

Foreword 3

Executive Summary 10

1 Key Policy Insights 16
- Introduction 17
- Economic growth has slowed and risks to the outlook are elevated 20
  - The economic recovery has slowed 20
  - Growth is set to pick up but uncertainty is high 23
  - Financial market risks have increased 25
- Addressing fiscal challenges to ensure debt sustainability 27
  - Shifting from crisis response to fiscal prudence 27
  - Making the tax system more growth and environmentally friendly 33
  - Improving pension sustainability 35
  - Raising employment of mothers with young children 37
  - Maximising the impact of public investment 40
  - Improving public procurement procedures 43
- Sustaining productivity growth 44
  - Improving the adaptability of education and skills provision 45
  - Fostering the innovation capacity and digital adoption 49
  - Improving the business environment 52
- Transitioning to carbon neutrality and ensuring energy security 55
  - Strengthening economic incentives to accelerate the pace of emission reductions 57
  - Tackling sector-specific challenges 61
  - Addressing the distributional and labour transition effects of climate policies 63
- References 68

2 Enhancing the efficiency, inclusiveness, and environmental sustainability of housing 74
- Households struggle with housing affordability and quality 75
- Boosting housing market efficiency 80
  - Streamlining land use policy and building permit procedures to enhance supply responsiveness 82
  - Reforming the regulation of tenant-landlord relations to facilitate the development of the private rental market 87
  - Reforming housing taxation to reduce pressure on demand for owner-occupied housing and improve affordability 91
- Enhancing housing inclusiveness 98
  - Expanding the stock of social and affordable housing 100
  - Reforming housing allowances to make them more effective 103
  - Improving living conditions for the Roma population 105
  - Promoting efforts to tackle homelessness 107
- Improving the energy efficiency of the housing stock 108
  - Extending the EU Emission Trading System to the residential sector 110

Complementing carbon prices with energy performance certifications, regulations, and financial incentives for building renovations 112
References 118

Tables

Table 1. Economic growth is set to pick up 11
Table 1.1. Macroeconomic indicators and projections 24
Table 1.2. Events that could lead to major changes in the outlook 24
Table 1.3. Government policies in response to the energy crisis and the war in Ukraine 28
Table 1.4. Illustrative fiscal impact of recommended reform package 31
Table 1.5. Illustrative impact of reform package on GDP per capita 31
Table 1.6. Past key recommendations on fiscal framework and tax policies 35
Table 1.7. Past key recommendations on pensions and mother's labour force participation 40
Table 1.8. Past key recommendations on public investment and procurement 44
Table 1.9. Past OECD recommendations on education, innovation and business environment 55
Table 1.10. Past OECD recommendations on environmental policies 65
Table 1.11. Recommendations on macroeconomic and structural policies 66
Table 2.1. There is room to simplify the building permit procedure 85
Table 2.2. Regulation of tenant-landlord relations in selected OECD countries 90
Table 2.3. Policy recommendations for addressing housing market challenges 117

Figures

Figure 1. Inflation has slowed 10
Figure 2. Business R&D spending is low 12
Figure 3. Reaching net neutrality requires accelerated policy action 13
Figure 4. High homeownership is associated with low residential mobility 13
Figure 1.1. The economy has been resilient and inflation has slowed 17
Figure 1.2. Economic convergence has slowed 18
Figure 1.3. Economic growth is subdued 21
Figure 1.4. Inflation has slowed but remains elevated 22
Figure 1.5. The labour market is robust 23
Figure 1.6. The banking sector appears resilient 25
Figure 1.7. A high share of mortgages will be subject to markedly higher interest rates in the near-term 26
Figure 1.8. The fiscal position has deteriorated 29
Figure 1.9. Stylised debt scenarios 30
Figure 1.10. Revenues rely heavily on social security contributions and the tax wedge is high 33
Figure 1.11. Rapid population ageing puts pressure on pension spending 35
Figure 1.12. The effective labour market exit age is among the lowest in the OECD 36
Figure 1.13. The employment rate of mothers with young children is low 38
Figure 1.14. Enrolment in pre-school education is low 39
Figure 1.15. Parental leave is much longer than in other OECD countries 40
Figure 1.16. Public investment is lower than in peer countries 41
Figure 1.17. The absorption of EU structural funds is slow 42
Figure 1.18. Public procurement procedures can be enhanced 44
Figure 1.19. Productivity convergence has been strong 45
Figure 1.20. Few students are enrolled in work-based learning programmes 47
Figure 1.21. The share of tertiary students enrolled abroad is very high 47
Figure 1.22. Activation policies and training should be expanded 48
Figure 1.23. Business R&D expenditure is low 49
Figure 1.24. Government support for business R&D is low 50
Figure 1.25. ICT investment and adoption of digital technologies by firms is low 51
Figure 1.26. Firms lag in the use of high-speed internet 51
Figure 1.27. The insolvency framework is relatively efficient 52
Figure 1.28. Perceived corruption remains high 54
Figure 1.29. Emissions have declined markedly but progress has slowed in recent years 56

Figure 1.30. Reaching net zero emissions requires accelerated policy action 57
Figure 1.31. Market-based environmental policies and technology support are underused 57
Figure 1.32. The effective carbon price is relatively low 58
Figure 1.33. Carbon prices vary widely across sectors 59
Figure 1.34. Public spending on environmental R&D is low 61
Figure 1.35. Carbon emissions of new cars are high 62
Figure 1.36. The charging infrastructure is lagging behind 63
Figure 2.1. House prices increased substantially until recently 75
Figure 2.2. House prices have increased faster than incomes until 2022 76
Figure 2.3. Homeownership is negatively correlated with residential mobility 77
Figure 2.4. Regional differences in housing affordability are high 77
Figure 2.5. Many young adults live with their parents and overcrowding is common 78
Figure 2.6. Electricity and gas bills account for a high share of housing-related expenditure 79
Figure 2.7. The housing stock is old and energy inefficient 80
Figure 2.8. Housing demand pressures have been strong 81
Figure 2.9. Housing supply is low 82
Figure 2.10. Per capita residential construction permits lag behind other EU countries 83
Figure 2.11. Taxes are lower for owner occupied property 92
Figure 2.12. Revenues from recurrent taxes on immovable property are low 94
Figure 2.13. Revenues from recurrent property taxes have not kept up with the increases in house prices 95
Figure 2.14. The share of vacant dwellings is relatively high 96
Figure 2.15. Many low-income households live in inadequate housing 99
Figure 2.16. Some regions and population groups suffer more from poor living conditions 99
Figure 2.17. The stock of social rental housing is low 100
Figure 2.18. State support for social rental housing is low and has decreased over time 101
Figure 2.19. Sources of funding for the State Housing Development Fund 102
Figure 2.20. Housing allowances are low and accessible to only few households 104
Figure 2.21. Many Roma live in precarious conditions with limited access to basic infrastructure 106
Figure 2.22. Residential heating is the major cause of air pollution 109
Figure 2.23. Residential heating by gas and solid fuels explains higher direct CO_2 emissions 110
Figure 2.24. Effective carbon tax rates in the building sector are low 111
Figure 2.25. The number of refurbished dwellings with the support of SHDF loans is decreasing 114

Boxes

Box 1.1. Key features of the Slovak Republic's government manifesto 19
Box 1.2. Quantifying the impact of selected policy recommendations 31
Box 1.3. The fiscal framework in Slovakia 32
Box 2.1. Digitalisation of building permits in Croatia and Estonia 87
Box 2.2. Reform to rebalance tenant-landlord relations and incentivise formalisation of the private rental market in Latvia 89
Box 2.3. A successful example of property tax administration in the Netherlands 97
Box 2.4. Property tax reforms in Denmark and Ireland 98
Box 2.5. The State Housing Development Fund: a valuable instrument for the development of social rental housing and housing renovations 102
Box 2.6. Legalisation of property rights in the municipality of Raslavice (Prešov region) 106
Box 2.7. Coordination between central and local government in fighting homelessness in Denmark 108
Box 2.8. Decarbonising the building sector through district heating 113
Box 2.9. Increasing efficiency of deep residential renovations: the More-Connect pilots in Estonia and Latvia 116

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BASIC STATISTICS OF SLOVAK REPUBLIC, 2022

(Numbers in parentheses refer to the OECD average)

LAND, PEOPLE AND ELECTORAL CYCLE					
Population (million)	5.4		Population density per km²	113.0	(39.0)
Under 15 (%)	15.7	(17.2)	Life expectancy at birth (years, 2021)	74.7	(78.7)
Over 65 (%)	17.0	(18.0)	Men (2021)	71.3	(75.9)
International migrant stock (% of pop., 2019)	3.4	(13.2)	Women (2021)	78.3	(81.7)
Latest 5-year average growth (%)	0.0	(0.4)	Latest general election	September-2023	
ECONOMY					
Gross domestic product (GDP)			Value added shares (%, 2021)		
In current prices (billion USD, 2023)	132.1		Agriculture, forestry and fishing	2.5	(2.8)
In current prices (billion EUR, 2023)	122.2		Industry including construction	32.1	(28.3)
Latest 5-year average real growth (%, 2023)	1.3	(1.5)	Services	65.4	(68.8)
Per capita (thousand USD PPP)	41.0	(60.2)			
GENERAL GOVERNMENT					
Expenditure (% of GDP)	42.3	(42.9)	Gross financial debt (% of GDP)	65.4	(113.5)
Revenue (% of GDP)	40.2	(39.7)	Net financial debt (% of GDP)	36.8	(67.6)
EXTERNAL ACCOUNTS					
Exchange rate (EUR per USD)	0.95		Main exports (% of total merchandise exports, 2021)		
PPP exchange rate (USA = 1)	0.49		Machinery and transport equipment	61.0	
In per cent of GDP			Chemicals and related products, n.e.s.	16.9	
Exports of goods and services	99.3	(33.4)	Manufactured goods	8.6	
Imports of goods and services	104.8	(34.8)	Main imports (% of total merchandise imports, 2021)		
Current account balance	-7.3	(-1.0)	Machinery and transport equipment	48.5	
Net international investment position	-61.7		Manufactured goods	15.1	
			Chemicals and related products, n.e.s.	10.0	
LABOUR MARKET, SKILLS AND INNOVATION					
Employment rate (aged 15 and over, %)	57.8	(57.5)	Unemployment rate, LFS (aged 15 and over, %)	6.1	(5.0)
Men	63.3	(65.4)	Youth (aged 15-24, %)	19.9	(10.9)
Women	52.6	(50.1)	Long-term unemployed (1 year & over, %)	4.1	(1.2)
Participation rate (aged 15 and over, %)	61.5	(60.9)	Tertiary educational attainment (aged 25-64, %)	29.2	(40.7)
Average hours worked per year	1,622	(1,752)	Gross domestic expenditure on R&D (% of GDP, 2020)	0.9	(2.9)
ENVIRONMENT					
Total primary energy supply per capita (toe)	3.1	(3.8)	CO_2 emissions from fuel combustion per capita (tonnes)	5.1	(7.8)
Renewables (%)	12.8	(12.0)	Water abstractions per capita (1 000 m³, 2021)	0.1	
Exposure to air pollution (more than 10 µg/m³ of PM 2.5, % of population, 2019)	100.0	(61.7)	Municipal waste per capita (tonnes, 2021, OECD: 2020)	0.5	(0.5)
SOCIETY					
Income inequality (Gini coefficient, 2021, OECD: latest available)	0.217	(0.316)	Education outcomes (PISA 2022 score)		
Relative poverty rate (%, 2021, OECD: 2020)	7.9	(11.8)	Reading	447	(476)
Median disposable household income (thousand USD PPP, 2021, OECD: 2020)	16.4	(26.6)	Mathematics	464	(472)
Public and private spending (% of GDP)			Science	462	(485)
Health care	7.8	(9.2)	Share of women in parliament (%)	21.3	(32.5)
Pensions (2019)	7.5	(9.5)	Net official development assistance (% of GNI, 2017)	0.1	(0.4)
Education (% of GNI, 2021)	4.1	(4.4)			

Note: The year is indicated in parenthesis if it deviates from the year in the main title of this table (2022). Where the OECD aggregate is not provided in the source database, a simple OECD average of latest available data is calculated where data exist for at least 80% of member countries.

Source: Calculations based on data extracted from databases of the following organisations: OECD, International Energy Agency, International Labour Organisation, International Monetary Fund, United Nations, World Bank.



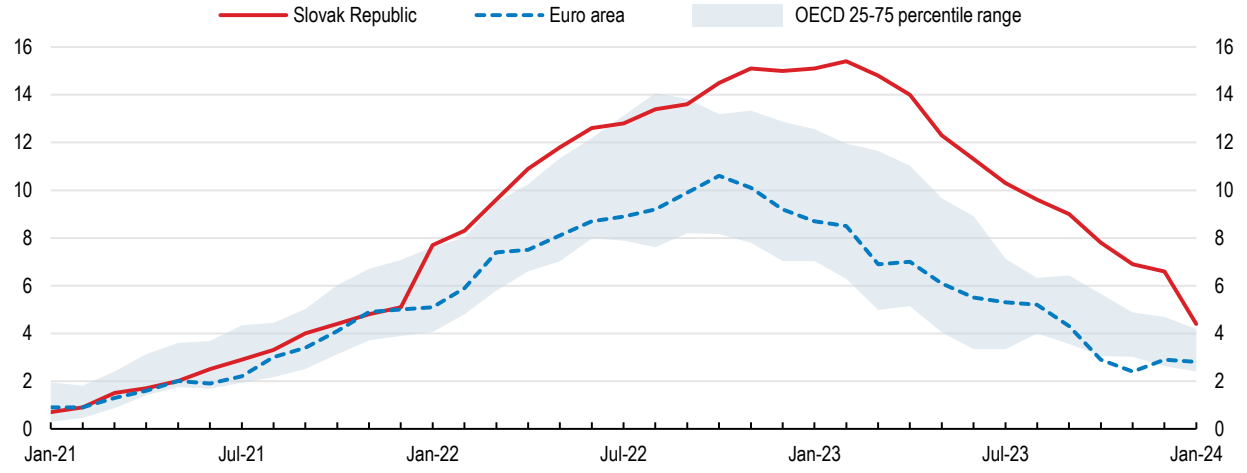
Executive Summary

Growth has slowed

The economy proved resilient to the energy crisis following Russia's war of aggression against Ukraine, but Slovakia's recovery from the COVID-19 pandemic has slowed. Inflation has fallen but remains elevated. Improving fiscal sustainability is a key challenge.

Figure 1. Inflation has slowed

Headline inflation, y-o-y % changes



Note: Harmonised CPI inflation for the Slovak Republic and euro area.
Source: OECD Price Statistics database.

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Growth has slowed amid high inflation, weak foreign demand and tighter financial conditions. Government measures and diversification of energy supply away from Russian sources have mitigated the energy shock but growth has slowed. Inflation has fallen (Figure 1) but underlying price pressures, especially from services, remain elevated. The labour market has been resilient and nominal wage growth has accelerated.

Growth is set to pick up in 2024 and 2025 (Table 1). Lower inflation will lead to higher real wage and consumption growth. The expected recovery of foreign demand and absorption of EU Recovery and Resilience funds will support exports and investment. Risks are mainly related to a resurgence in energy prices and supply chain disruptions.

Risks from higher interest rates and the cooling real estate sector should be closely monitored. The banking sector appears resilient but many mortgage holders will have to face significantly higher interest rates in the near-term and the banking sector has become more exposed to mortgage credit and the commercial real estate sector in recent years.

Table 1. Economic growth is set to pick up

	2022	2023	2024	2025
Real GDP (% change)	1.8	1.1	2.1	2.6
Unemployment rate (%)	6.1	5.8	5.9	5.8
Consumer price inflation (%)	12.1	11.0	3.4	2.7
Public debt (Maastricht, % of GDP)	57.8	57.0	59.3	61.4

Source: OECD EO 114 database, with updates.

Ambitious fiscal consolidation is needed to rebuild fiscal buffers, support the disinflation process and improve long-term fiscal sustainability in the face of rapid population ageing. Expansionary fiscal policy during the pandemic and the energy crisis have deteriorated public finances. A credible medium-term fiscal consolidation strategy is needed that should draw on spending reviews to improve the efficiency of expenditures. Measures to mitigate increasing costs of living, if needed, should be targeted at households not sufficiently covered by the social safety net. Shifting the tax mix from labour to property and environmental taxes could make the tax system more growth and environmentally friendly.

Substantial inflows of EU funds provide an opportunity to pursue ambitious consolidation without harming investments for digitalisation and the green transition. Maximising the impact of EU inflows requires improving the historically low absorption of EU funds and enhancing the efficiency of public investment spending.

Pension reforms in 2022 have had an overall positive impact on the sustainability of the public pension system, especially by linking the statutory retirement age to life expectancy. Nevertheless, a substantial funding gap remains. Tightening pathways to early retirement would further improve pension sustainability and help raise the low effective retirement age.

Increasing employment rates of mothers with young children would help reduce the gender wage gap and mitigate the impact of a shrinking work force. Family benefits need to be reviewed with a view to reducing disincentives for mothers with young children to work outside the home. Enhancing access to pre-school facilities and increasing the flexibility of working arrangements can help combine work and family obligations.

Sustaining strong productivity growth

The manufacturing sector has been a key engine of productivity growth, thanks to its integration into global value chains. However, the sector is highly exposed to global shocks and trends such as automation and the green transition.

The quality and adaptability of education and skills provision needs to be improved to provide opportunities to reskill and upskill workers throughout their career. Expanding work-based learning, improving the quality of tertiary education through targeted funding, strengthening incentives to participate in adult learning and increasing training for workers out of work would help reduce skill imbalances, retain and attract high skilled people, and respond to changing skill demands.

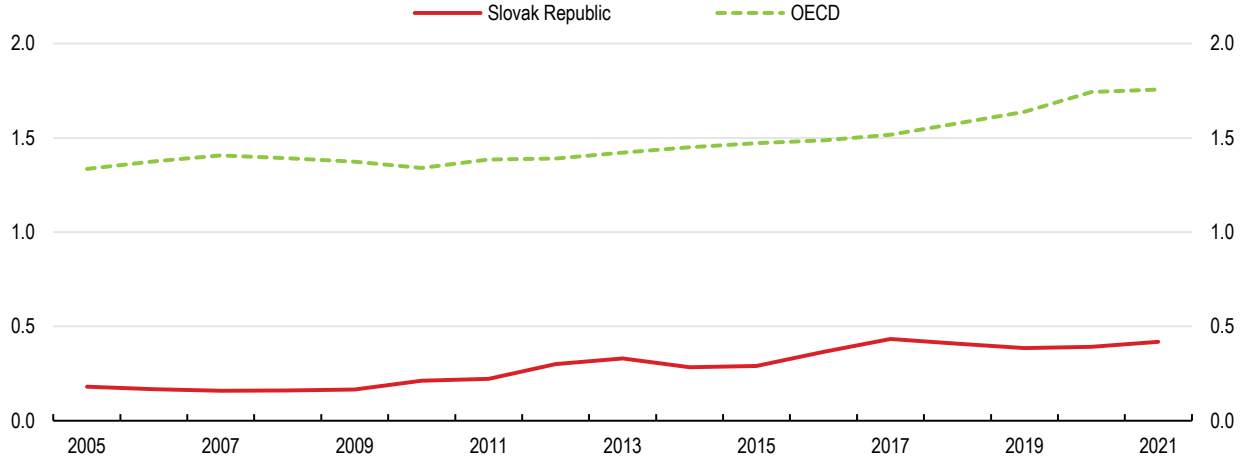
The capacity to innovate and adopt new technologies needs to be strengthened. Patent applications, the share of innovative firms and

expenditure on research and development (R&D) are low (Figure 2), and firms lag in the adoption of many digital tools and technologies. Targeted support for R&D investment and technology adoption, especially for small firms, can help overcome financing constraints.

Continuing efforts to strengthen the anti-corruption framework are crucial to improve the business environment. Despite progress, many firms still view corruption as a widespread problem when conducting business. A new Anti-Corruption Strategy is planned and should be accompanied by a specific framework for regulating lobbying.

Figure 2. Business R&D spending is low

Expenditure on R&D in the business sector, as % of GDP



Source: OECD Main Science and Technology Indicators database.

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Transitioning to carbon neutrality

Slovakia has significantly reduced greenhouse gas (GHG) emissions over the past three decades, but progress has slowed in recent years (Figure 3). Further reducing the energy and emission intensity of the economy can help meet climate goals, reduce dependency on imported fossil fuels and enhance energy security.

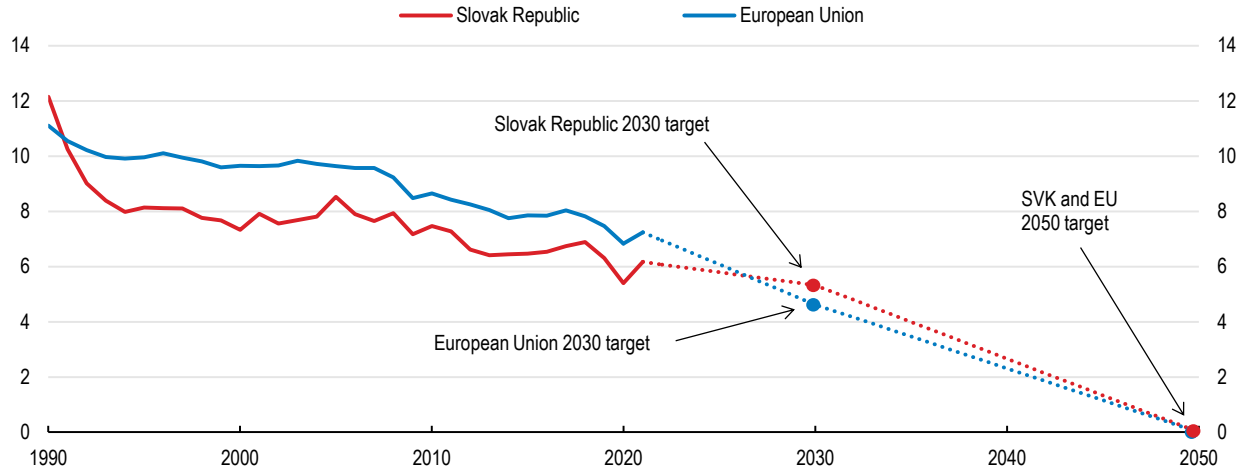
Effective carbon prices are too low to reach environmental targets and vary widely across sectors. Only around 20% of GHG emissions have a net effective carbon rate above EUR 60 per tonne of CO_2 equivalent, a mid-range estimate of current carbon costs. Incentives to boost green investment and innovation need to be strengthened to reduce emissions in energy-intensive industries.

Emissions in the transport sector continue to increase and the sector is the second largest source of GHG emissions. The car fleet is older and more polluting than in other EU countries. Reducing transport emissions requires increasing the share of low- or zero emission vehicles and improving public transport and the quality of the rail network.

A larger share of workers is employed in heavily polluting industries than in most OECD countries. Active labour market policies are key to help workers affected by the green transition find jobs more quickly. Regional development policies can mitigate the impact on the most vulnerable regions.

Figure 3. Reaching net neutrality requires accelerated policy action

Net greenhouse gas emissions, tonnes of CO_2 equivalent per capita



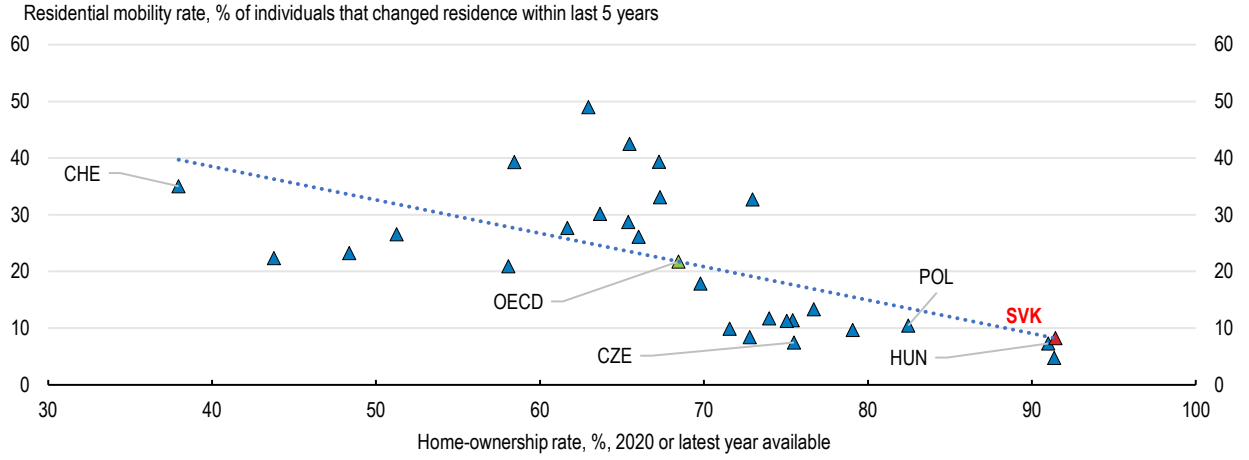
Note: Greenhouse gas (GHG) emissions include those from the land use/land use change and forestry sector (LULUCF).
Source: OECD Environment database; OECD Population database; OECD calculations.

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Addressing housing challenges

Housing affordability has deteriorated in the past decade. Improving housing affordability requires structural reforms to improve the efficiency of the housing market, property tax reforms, and targeted support to vulnerable households. Incentives for housing renovation must be strengthened to address energy poverty and achieve environmental goals.

Figure 4. High homeownership is associated with low residential mobility



Source: OECD Affordable Housing database; and OECD (2021), Brick by Brick: Building Better Housing Policies, OECD Publishing, Paris, https://doi.org/10.1787/b453b043-en.

StatLink https://stat.link/n3byc0

Complex administrative procedures for granting building permits slow down construction projects. Implementing more efficient planning and construction processes, including by adopting digital tools in building permits procedures, would make housing supply more responsive and reduce pressures on house prices.

An underdeveloped rental market hampers mobility (Figure 4) and leads to high regional inequalities. Reforms to rebalance landlord-tenant rights and to reduce the tax bias in favour of owner-occupied housing would facilitate the development of a rental market. Changing the base of the recurrent taxes on immovable property from area to market values would encourage a more efficient use of the current housing stock, while raising the equity of the property tax system.

Many low-income households, especially among the Roma, live in low-quality and overcrowded housing, overburdened by housing costs. Ensuring adequate supply and funding for construction and operation of social housing is crucial to improve living conditions. Accelerating the formalisation of property rights in Roma settlements would help to provide basic infrastructures, such as access to tap water and basic sanitary facilities.

The housing stock is often old and energy-inefficient, exacerbating energy poverty and air pollution. Implementing stricter regulation and targeted financial assistance to households most in need would help incentivise housing renovations, reduce energy poverty and advance environmental objectives.

Main findings	Key recommendations
Strengthening the recovery and ensuring debt sustainability	
The fiscal position has deteriorated markedly since 2019. Inflation remains elevated. Medium- and long-term fiscal pressures especially related to ageing are high.	Start fiscal consolidation while providing targeted support to households not sufficiently covered by the social safety net, if needed. Prepare a credible medium-term fiscal consolidation plan to ensure fiscal sustainability, drawing on spending reviews to improve the efficiency of expenditures.
The labour tax wedge is high, particularly for low-income earners. The tax burden on labour is high, while taxes on property are underutilized.	Reduce the tax wedge in particular for low-income earners. Shift the tax mix from labour towards property and environmental taxes.
The funding gap in the public pay-as-you-go pension system is significant. The effective age of retirement is low. A new early retirement scheme has been introduced, allowing retirement after 40 years of contributions.	Link the minimum number of years of contributions required for early retirement to increases in the statutory retirement age. Equalise the penalties of early retirement options and apply rules of actuarial neutrality to ensure pension sustainability.
Childcare facilities are insufficient, especially in some regions. Paid parental leave is longer than elsewhere, negatively affecting the career prospects of mothers and gender wage equality.	Expand the supply of high-quality affordable childcare facilities, especially in underserved regions. Reduce the maximum duration of parental leave and make part of it conditional on the second parent's participation.
Public investment lags behind peers and the absorption rate of EU funds has been historically slow, largely reflecting deficiencies in project planning and preparation.	Strengthen project preparation and implementation capacity at line ministries and lower levels of government via targeted training.
Sustaining productivity growth	
The research quality of higher education institutions is low, many students leave the country to study and few of them return home after their studies contributing to brain drain.	Expand the use of targeted funds for higher education institutions to reward teaching and research excellence.
The share of unemployed adults participating in formal and non-formal learning is low. Spending on active labour market policies is low.	Expand active labour market programmes, in particular re-training measures for the low-skilled and persons at risk of job loss.
Business R&D spending is low.	Make the R&D tax allowance refundable for small and young firms.
Levels of perceived corruption remain high and judicial independence low.	Introduce regulations on lobbying and strengthen the legislation on conflicts of interest and asset declarations.
Transitioning to carbon neutrality	
The effective carbon price is relatively low and carbon prices vary significantly across sectors in the economy. Fossil fuel subsidies and tax expenditures weaken price signals and can jeopardise climate goals.	Phase out tax exemptions for the use of fossil fuels and introduce a carbon tax in for all sectors not covered by the EU ETS. Mitigate the impact on vulnerable households via targeted transfers.
The car fleet is older and more polluting than in other EU countries. Less developed regions, and regions where populations commute the longest distances and have the oldest car fleets, generally also suffer from the lowest access and quality to railway infrastructure.	Accelerate investment in public transport, subject to cost-benefit analysis, especially in the quality of the rail network in underserved areas.
Addressing housing challenges	
Limited digital adoption slows the administrative process for building permits.	Accelerate the adoption of digital tools in building permits procedures, including by introducing digital platforms as one-stop shops.
Standard indefinite rental contracts have become rare given the high level of tenant protection they afford, and most new contracts are subject to the Short-Term Act with little protection to the tenant.	Amend the rental regulations to better balance the interests of landlords and tenants.
Recurrent taxes on immovable property are low. Their design, which bases recurrent taxes on immovable property on the area of the property, harms efficiency and equity.	Change the tax base for recurrent taxes on immovable property from area-based to regularly updated market values.
The social housing stock is inadequate and public spending on the construction of social rental housing is low.	Set clear targets for social housing units with portable eligibility rights in collaboration with municipalities and ensure adequate funding from the central and municipal budgets for their construction and operation.
Many Roma live in informal settlements without legal title to the land, which prevents them from accessing basic infrastructures (e.g access to electricity, drinkable water) and often results in forced evictions and homelessness.	Accelerate the formalisation of property rights in Roma settlements.
The revision of the EU Energy Performance of Buildings Directive aims for higher quality and comparability of Energy Performance Certificates, and targets to reduce the average primary energy use of residential buildings by 16% mainly through renovations of the worst-performing units by 2030.	Extend coverage of energy performance certificates and incentivise renovations of worst-performing dwellings before 2030.
Financial support for housing renovations can have high costs per ton of CO_2 abated. Untargeted renovation grants could disproportionally benefit higher-income households and fund renovation works that would have been undertaken even in absence of the support.	Target renovation grants to low-income households living in the most energy inefficient dwellings.

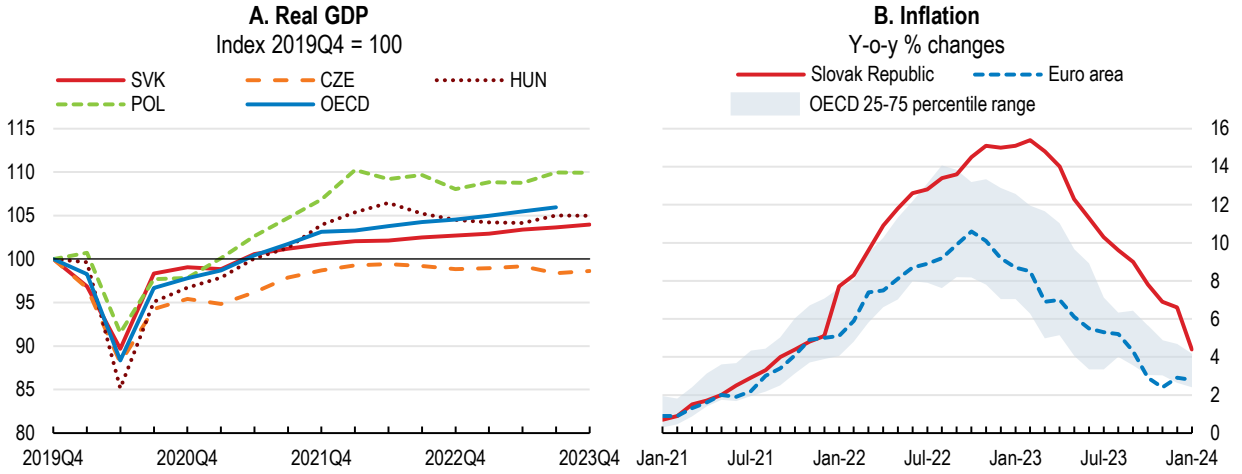
1 Key Policy Insights

The economy has weathered the recent crises relatively well, but growth has slowed amid high inflation, weak foreign demand and tight financial conditions. The pandemic and the energy crisis have deteriorated public finances and steady fiscal consolidation is now needed to rebuild fiscal buffers and improve long-term fiscal sustainability. A tax reform can make the tax system more growth and environmentally friendly, while further reforms to the pension system and to increase the employment of mothers with young children can mitigate the impact of rapid population ageing. Improving the absorption of EU funds and enhancing the efficiency of public investment can spur growth, reduce socio-economic gaps and accelerate the green transition. Sustaining economic convergence and facilitating inclusive structural change requires improving skill provision at all stages of the learning cycle, fostering the domestic innovation capacity and improving the business environment. A more consistent pricing of carbon across the economy and stronger incentives for green investment and innovation would make growth more sustainable.

Introduction

The Slovak economy has been relatively resilient following Russia's war of aggression against Ukraine and the ensuing energy crisis, but the recovery from the COVID-19 pandemic has slowed significantly (Figure 1.1). Government measures to cushion the energy price shock and diversification of energy supply away from Russian sources have helped avoid a downturn, but GDP growth in 2022 and 2023 slowed markedly below pre-pandemic trends. Inflation has slowed from its peak in early 2023 but remains elevated, and energy and food price rises have fed through to other goods and services prices. Growth is set to pick-up in 2024 and 2025 but risks to the near-term economic outlook are high.

Figure 1.1. The economy has been resilient and inflation has slowed



Note: Panel B, harmonised CPI inflation for the Slovak Republic and euro area.
Source: OECD National Accounts database; and OECD Price Statistics database.

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Improving fiscal sustainability is a key challenge. Expansionary fiscal policy during the pandemic and the energy crisis have led to a marked deterioration of public finances. While most crisis measures are temporary, they have often not been well targeted, and substantial permanent expenditure increases, especially for cash transfers to families with children, have led to a deterioration of the structural fiscal deficit. Moreover, Slovakia's population is ageing rapidly, with one of the fastest future declines in the working-age population in the European Union, aggravating fiscal challenges. Pension reforms in 2022 have improved the sustainability of the public pension system overall, but further efforts are needed to moderate future pension expenditures.

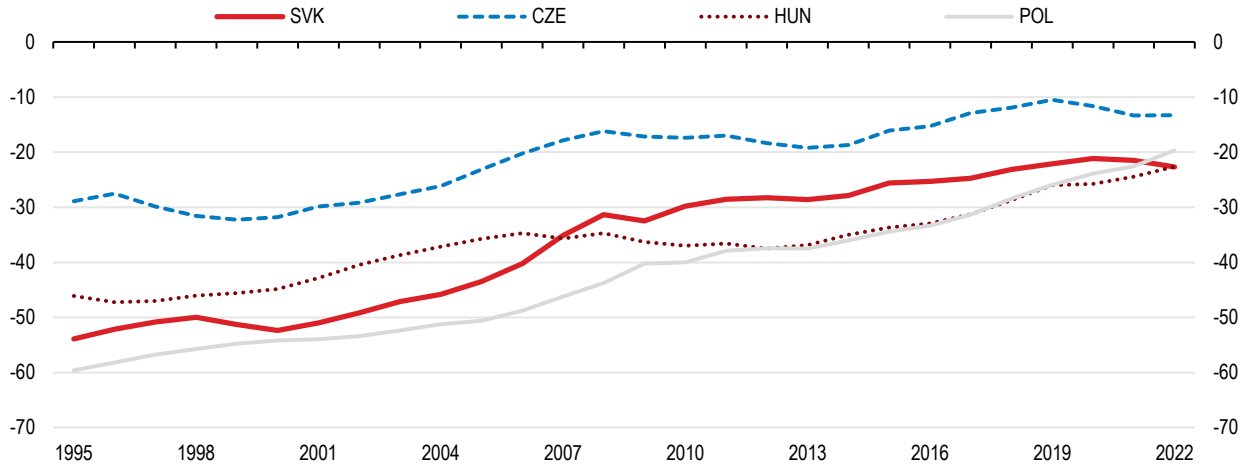
The economic convergence process, which had already slowed after the global financial crisis, has stalled since the pandemic (Figure 1.2). The manufacturing sector, especially cars and electronics, has been a key driver of productivity growth but faces diminishing benefits from the integration into global value chains. Integration has largely been based on downstream activities of value chains with limited domestic value added. Moreover, Slovakia faces important challenges from the digital and green transitions, due to the large share of low-to medium skill routine jobs. The share of jobs at risk of automation (e.g. via robots or AI) (Lassébie and Quintini, 2022[1]) and in polluting industries is high, implying a substantial need to upskill and reskill workers and facilitate job transitions. Fostering productivity growth and reviving economic convergence, will require broadening the drivers of growth, improving educational outcomes and the adaptability of education and skills provision, fostering the innovation capacity and a business environment that facilitates structural change.

Income inequality and poverty are low overall but high inflation has hit low-income groups particularly hard. Low-income households have especially suffered from high food price inflation, and the risk of poverty and

social exclusion has increased (NBS, 2023[2]). Moreover, socioeconomic gaps remain significant in a number of areas. Education results are weak and highly dependent on socio-economic background. Mothers have long career breaks after birth contributing to a gender wage gap above the OECD average. Housing affordability has deteriorated, and overcrowding rates are high. The Roma, about 8% of the population, often live in poor living conditions and poverty, with very low educational outcomes, employment rates and life expectancy.

Figure 1.2. Economic convergence has slowed

GDP per capita gaps to the OECD average, % difference



Note: Real GDP, constant 2015 PPPs.
Source: OECD National Accounts database; OECD Economic Outlook: Statistics and Projections database; and OECD calculations.
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Accelerating the green transition holds great potential to strengthen energy security. The economic transformation in the 1990s has significantly reduced greenhouse gas (GHG) emissions, but progress has slowed since then, and the energy-intensity of the economy remains above OECD and EU averages. The often poor-quality of the housing stock contributes to energy poverty, high pollution, and high emissions. Decarbonising the economy will require more investment and more ambitious policies.

Against this background, the main messages of the Survey are:

- Steady fiscal consolidation is needed to rebuild fiscal buffers, support the disinflation process and improve long-term fiscal sustainability in the face of rapid population ageing. Improving the absorption of EU funds and enhancing the efficiency of public investment spending can spur growth, reduce socio-economic gaps and accelerate the green transition.
- Sustaining economic convergence and facilitating inclusive structural change requires improving skill provision at all stages of the learning cycle, fostering the domestic innovation capacity and improving the business environment, especially by continuing the fight against corruption. A more consistent pricing of carbon across the economy and stronger incentives for green investment and innovation would make growth more sustainable.
- Improving housing affordability requires reforms to strengthen the supply response to changing demand developments and targeted support to low-income households, for example by expanding social housing. Developing the private rental market can spur residential and labour mobility. Strengthening incentives to accelerate housing renovation can help achieve environmental goals and reduce energy poverty.

Box 1.1. Key features of the Slovak Republic's government manifesto

In November 2023, the newly elected government adopted a programme statement delineating the key policy priorities:

- **Enhancing energy and food security**, by diversifying energy sources, including by creating the conditions for the integration of renewable energy sources; and compensating households and "other vulnerable customers" for increases in prices. In case of "disproportionate" basic food price increases, the government intends to take corrective action.
- **Ensuring sustainability of public finances**, by boosting spending efficiency and raising revenues. On the expenditure side, the government aims to evaluate and optimise the current structure and activities of the public administration. On the revenue side, the programme includes new taxation measures, including a levy on banks' "excess" profits, higher taxation of multiple residential properties and selected products and activities, such as tobacco, alcohol and gambling. Additionally, the new government intends to enhance the progressivity of the income tax. The programme also includes the simplification of tax payments, more efforts against tax evasion, and the implementation of more effective audit and control measures.
- **Strengthening the long-term sustainability of the pension system and maximising benefits for pensioners,** by reassessing the effectiveness of all three pillars of the pension system. The 13th pension will be increased to the level of the average pension for all pensioners and extended to the armed forces pensioners. The retirement age will take into account people's health condition and ability to work.
- **Creating a more favourable business environment**, including by stabilising the legislative framework, reducing bureaucratic and administrative complexity in the establishment of business, improving access to credit and streamlining public procurement procedures.
- **Improving affordability and quality of housing**, by supporting the expansion of the social rental housing stock and the introduction of mortgage support for homeowners. Additionally, the programme foresees simplifying the building permits procedure to facilitate constructions. Improving the energy efficiency of housing will be achieved through enhanced data collection on the energy efficiency of the housing stock and the acceleration of buildings renovations.
- **Increasing living standards**, by raising the minimum wage and broadening eligibility to social benefits, such as benefits in material need, the parental allowance, allowances for disabled people, as well as minimum pensions. Housing allowances, originally part of the material-need benefit, will also be introduced as a benefit.
- **Reducing regional inequalities and social exclusion**, by aligning funding and responsibilities to lower levels of governments, supporting mechanisms of inter-municipal cooperation and promoting the inclusion of minorities in the education system and labour markets.
- **Improving education outcomes and skills**, by expanding the supply of early childhood education, increasing the quality of higher education institutions, and raising funding for higher education institutions. The government plans to strengthen cooperation with universities to attract new talents to the teaching profession. Additionally, the government aims to support the continuous development of skills through lifelong learning activities.
- **Increasing the efficiency of innovation support,** including by evaluating existing tax-based support measures and supporting public-private partnership for financing innovative projects.

Economic growth has slowed and risks to the outlook are elevated

The economic recovery has slowed

Russia's war against Ukraine has slowed economic growth. After a strong economic rebound from the COVID-19 pandemic in 2021, growth slowed markedly in 2022 and 2023 due to weakening global demand, surging prices, tightening financial conditions and high uncertainty (Figure 1.3). With high inflation weighing on disposable income and the savings built-up during the pandemic depleted in 2022, households reduced consumption in 2023. Business and consumer confidence have improved but remain low. Production and exports in the automotive industry strengthened in the first three quarter of 2023 as supply chain bottlenecks eased and firms are working through order backlogs. However, the cooling of foreign demand also affected the automotive industry at the end of 2023 and exports remained subdued in other industries. Tighter financial conditions slowed bank lending to households and firms, and led to a cooling of the real estate market, with residential investment declining sharply. A substantial pickup in the absorption of EU structural funds in 2023 supported public investment.

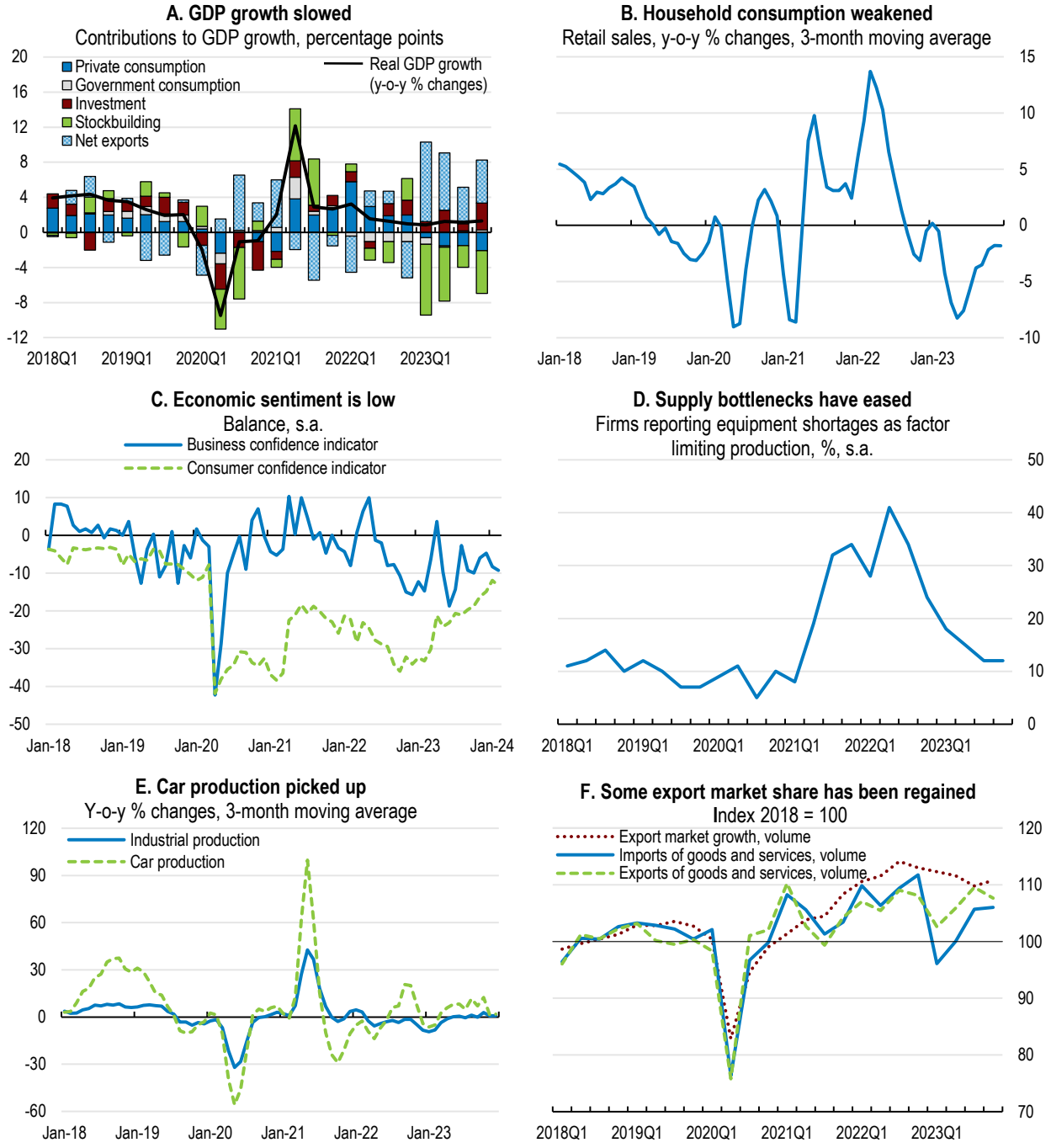
Slovakia is diversifying its energy sources and strengthening energy security. Before the war in Ukraine, Slovakia imported over 80% of natural gas, and virtually all of its crude oil and nuclear fuel from Russia. Imported natural gas, oil and nuclear fuel accounted for around two-thirds of total energy supply. Russian gas imports of fallen by around 65%, thanks in part to a new pipeline to Poland finalised in November 2022, which gives the country access to LNG imports via terminals in the Baltic Sea and Norwegian gas. Before the war, crude oil was exclusively imported through the Druzhba pipeline from Russia, which has been exempted from the EU's oil embargo. Slovakia has made progress in changing the processing technology in the refinery to allow for different types of oil, and in diversifying oil imports via the Adria pipeline to Croatia. Finally, the electricity supplier has recently signed a contract to replace Russian nuclear fuel. The new REPowerEU chapter of the Resilience and Recovery plan, allocates about EUR 400 million to foster renewable energy and electricity grid capacity, energy efficiency and sustainable transport to further reduce import dependency.

Inflation has slowed but underlying price pressures remain elevated. Harmonised consumer price inflation peaked at 15.4% in February 2023 and has slowed to 4.4% in January 2024. The initial surge in inflation in 2022 was driven by food prices and to a lesser extent energy prices, that added to pre-existing price pressures from supply chain disruptions, but inflation has since become broad-based (Figure 1.4). As in other central and eastern European countries, the larger weight of (processed) food and energy in the consumption basket, and higher energy intensity of the economy make consumer prices inflation more sensitive to commodity price shocks. Food prices surged on the back of higher input costs, but evidence also points to increased mark-ups in the food and retail industry in the first half of 2022 (Casalis, 2023[3]). The higher inflation in 2023 was partly due to the delayed pass-through of global energy prices to regulated energy prices for households in Slovakia. Regulated heat, gas and electricity price increases were capped for households in 2023, but still added to inflation in year-on-year terms, whereas the contribution turned negative in many OECD and euro area countries (Panel C). Inflation slowed in the course of 2023 and early 2024 as food price inflation and supply chain bottlenecks eased, and industrial producer price inflation markedly abated, mainly thanks to lower imported input prices. The caps on regulated heat, gas and electricity prices for households have been extended to 2024, contributing to the further slowdown in inflation in January 2024. The reduction in services price inflation has been more moderate (Panel D).

The labour market has been resilient. It benefitted from the integration of a significant number of foreign workers in 2022 and 2023. Around 20,000 Ukrainian refugees found employment by the end of 2023 (about 0.7% of the labour force). Moreover, there has also been a significant increase in the number of workers from Serbia, Georgia and India. Most of these foreign workers have filled low-skilled jobs with labour shortages. The unemployment rate continued to fall in 2023 and is around pre-pandemic levels (Figure 1.5). Employment continued to increase in 2023, with employment gains concentrated in the

construction and services sectors. Nominal wage growth has accelerated close to 10% year-on-year, and real wage growth has turned positive in recent months (Panel B).

Figure 1.3. Economic growth is subdued

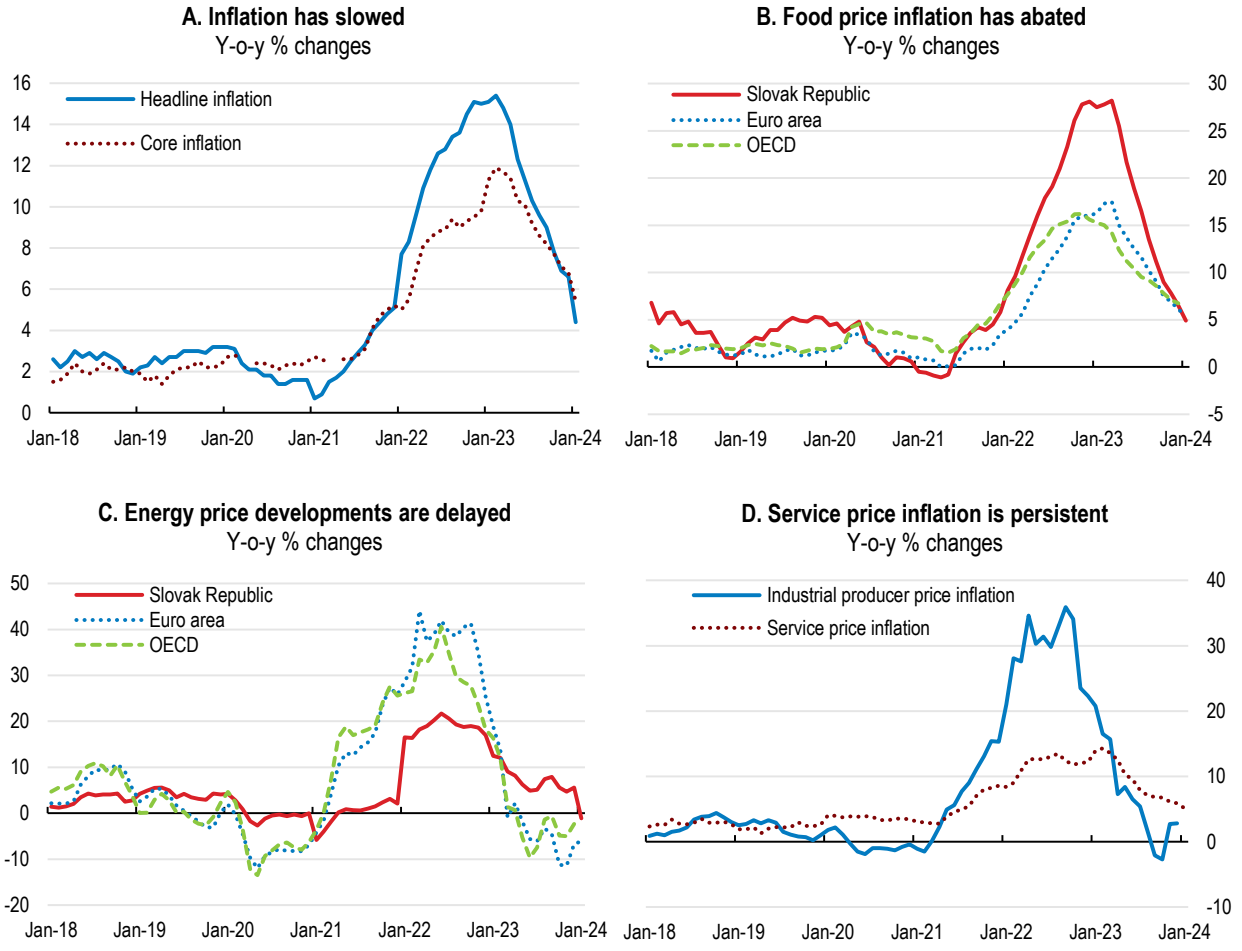


Note: Panel C, values of the confidence indicators range from -100 (responses of all respondents are totally pessimistic) to 100 (responses of all respondents are totally optimistic). Panel D, data refer to the Economic Sentiment Indicator, confidence in industry, quarterly questions, factors limiting the production: equipment shortages.

Source: OECD Economic Outlook: Statistics and Projections database; Eurostat; Statistical Office of the Slovak Republic; and OECD calculations.

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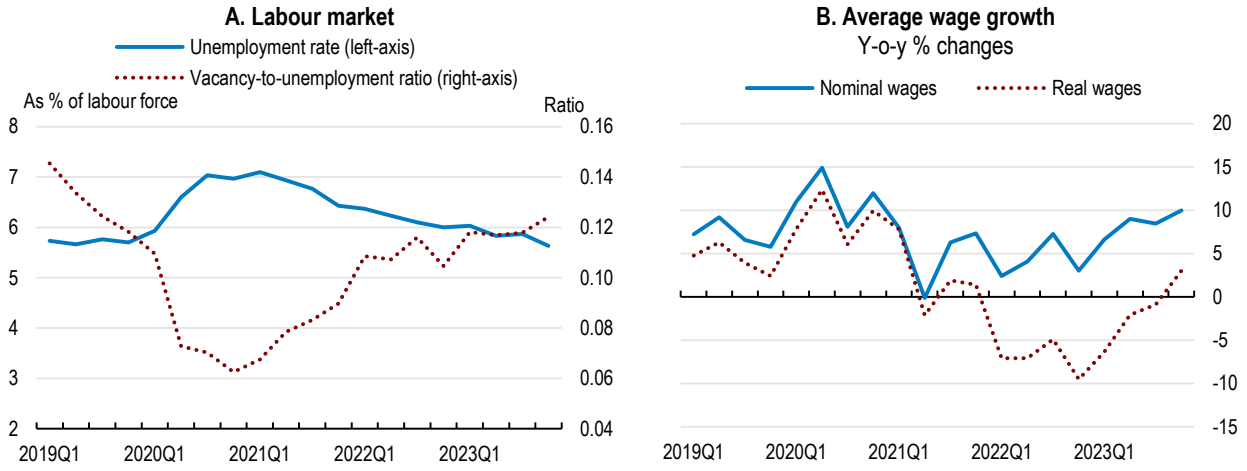
Figure 1.4. Inflation has slowed but remains elevated



Note: Harmonised CPI inflation for the Slovak Republic and euro area.
Source: OECD Price Statistics database; and Statistical Office of the Slovak Republic.

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Figure 1.5. The labour market is robust



Note: Panel A, data refer to the average number of job vacancies divided by registered unemployment. Panel B, average wages refer to the national-accounts based total wage bill divided by the number of hours worked (by employees) in the total economy. Real average wages are deflated by a price deflator for private final consumption expenditures in 2022 prices.
Source: OECD Labour Force Statistics database; Statistical Office of the Slovak Republic; OECD National Accounts database; and OECD calculations.

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Growth is set to pick up but uncertainty is high

GDP growth is projected to pick up to 2.1% in 2024 and 2.6% in 2025 (Table 1.1). Lower inflation will lead to an increase in real wages, which will drive a recovery in private consumption and some rebuilding of households' savings. The gradual easing of financial conditions and usage of EU Recovery and Resilience funds will support investment in 2024 and 2025. The expected recovery in foreign demand will strengthen exports. Headline inflation is projected to continue to slow thanks to reductions in global energy and food prices, while core inflation will decline more slowly due to the lagged pass-through of commodity prices to other goods and services prices and the effects of nominal wage increases.

The uncertainty surrounding the outlook is high. Due to its relatively large and highly internationally integrated manufacturing sector, Slovakia is strongly exposed to global shocks. A prolonged war in Ukraine or an escalation of the conflict in the Middle-East could lead to the resurgence of global energy prices and to lower foreign demand. Renewed supply chain disruptions in the automotive sector or a slow recovery of demand in Europe (especially Germany) would particularly weigh on growth. High input costs, including for energy, and high interest rates could stretch firms' financial buffers and lead to more insolvencies. Households are facing increasing debt-servicing costs that may become difficult to meet. The assumed phasing out of energy support measures in 2025 could lead to higher inflation and lower consumption. Lower absorption of EU funds would negatively affect investment. Strong wage increases could hamper the competitiveness of Slovakia's export-oriented business sector. On the upside, a faster decline in inflation could spur household consumption.

Table 1.1. Macroeconomic indicators and projections

	2021	2022	2023	2024[1]	2025[1]
	Current prices (EUR Billions)				
Gross domestic product (GDP)	100.3	1.8	1.1	2.1	2.6
Private consumption	56.9	5.6	-2.3	1.0	2.8
Government consumption	21.2	-4.2	-0.5	1.5	1.0
Gross fixed capital formation	19.3	4.5	9.6	9.0	3.4
Housing	4.0	4.1	-12.8	-2.3	0.5
Final domestic demand	97.4	3.2	0.4	2.8	2.6
Stockbuilding[2]	. .	-0.2	-5.5	1.5	0.0
Total domestic demand	100.3	2.9	-4.5	4.3	2.6
Exports of goods and services	92.0	3.1	-0.9	2.7	3.0
Imports of goods and services	92.1	4.5	-6.8	5.0	2.9
Net exports[2]	-0.1	-1.2	6.2	-2.1	0.1
Memorandum items					
Potential GDP		1.9	1.9	1.9	1.8
Output gap (% of potential GDP)		-0.8	-1.6	-1.3	-0.5
Employment		1.7	0.1[1]	-0.3	-0.1
Unemployment rate (% of labour force)		6.1	5.8[1]	5.9	5.8
GDP deflator		7.5	10.1	5.8	2.6
Harmonised index of consumer prices		12.1	11.0	3.4	2.7
Harmonised index of core inflation[3]		8.2	9.5	4.2	2.9
Household saving ratio, net (% of household disposable income)		-2.5	0.8	3.1	2.7
Current account balance (% of GDP)		-7.3	-1.6	-3.4	-3.1
General government fiscal balance (% of GDP)		-2.0	-5.8	-6.0	-5.3
Underlying general government fiscal balance (% of potential GDP)[4]		-1.7	-5.8	-6.7	-6.3
Underlying government primary fiscal balance (% of potential GDP)[4]		-0.9	-5.1	-5.9	-5.3
General government debt, Maastricht definition (% of GDP)		57.8	57.0[1]	59.3	61.4
General government net debt (% of GDP)		36.8	38.8[1]	41.9	45.0
Three-month money market rate, average		0.3	3.4	3.8	3.1
Ten-year government bond yield, average		2.1	3.6	3.7	3.8

1. OECD estimates.
2. Contribution to changes in real GDP.
3. Index of consumer prices excluding food, energy, alcohol and tobacco.
4. EU Recovery and Resilience funds are treated as positive one-offs.
Source: OECD EO 114 database, with updates.

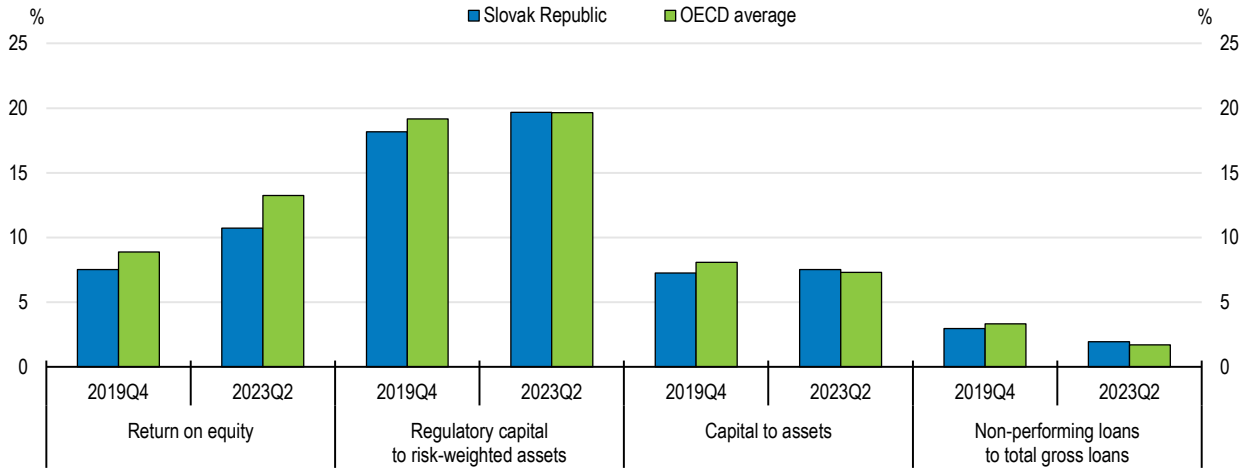
Table 1.2. Events that could lead to major changes in the outlook

Shock	Possible impact
Global energy, food or raw material shortages	A re-intensification of energy, food and raw material supply disruptions would further accelerate inflation and cause a contraction in global trade, leading to a deep recession.
Major house price correction	A large correction in housing prices could expose vulnerabilities in the financial system, with repercussions to the real economy.
Heightened geopolitical tensions	Geopolitical instability would increase uncertainty and weaken both domestic and external demand. An increase in trade restrictions would hurt Slovakia's export-oriented business sector.
Outbreak of a new vaccine-resistant COVID variant	Renewed waves of infections could potentially lead to new containment measures and lower domestic spending.

Financial market risks have increased

The banking sector appears resilient overall. The Slovak banking sector is highly concentrated, with the five largest banks holding 79% of total banking sector assets. Foreign-owned banks account for around 87% of total banking sector assets. Banking sector profits increased in 2022 and the first nine months of 2023, driven mainly by higher net interest income as monetary policy tightened in the euro area, and profitability exceeds pre-pandemic levels (Figure 1.6). Capital and liquidity ratios exceed regulatory minima and non-performing loan ratios are low (NBS, 2023[4]). Stress tests show that banks' capital buffers are strong enough to sustain a significant adverse shock while complying with regulatory limits (NBS, 2023[5]). To further increase the resilience of the banking sector, the countercyclical capital buffer was hiked by 50 basis points to 1.5% in August 2023.

Figure 1.6. The banking sector appears resilient



Note: 2023Q2 data for the OECD average is calculated on the basis of latest available quarter for the OECD countries, ranging from 2022Q2 to 2023Q2.
Source: IMF Financial Soundness Indicators database.

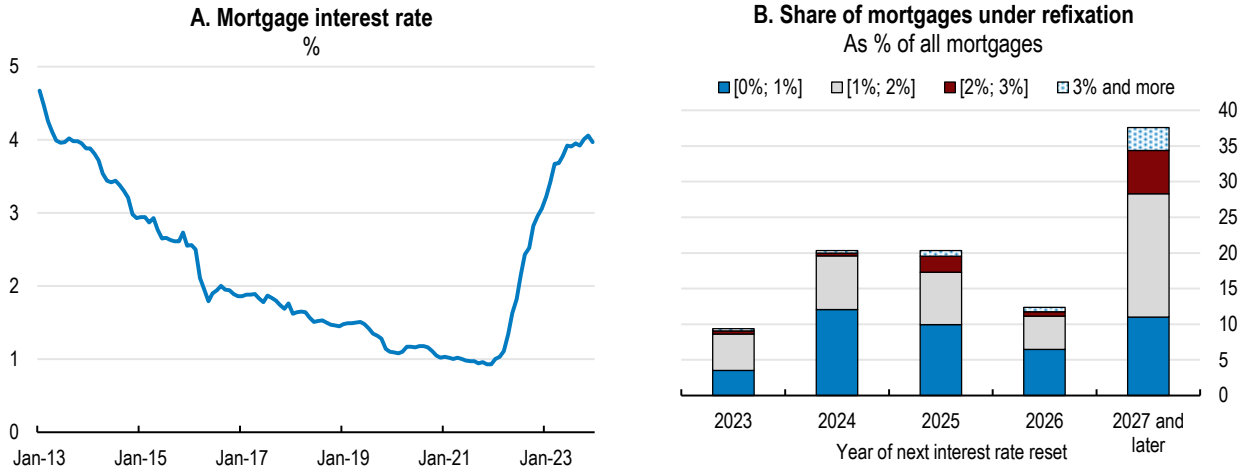
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The property market is cooling. House prices grew strongly from 2015 until the onset of the pandemic and growth further accelerated in 2021 and early 2022. Strong demand for housing driven by robust household income growth, low unemployment and low interest rates was not matched by a sufficient supply response. As discussed in detail in *Chapter 2* this reflects inefficiencies in the housing market *inter alia* related to building permits, low property taxation and tax biases in favour of homeownership. House prices started to fall in the second half of 2022 as monetary tightening in the euro area led to a sharp increase in mortgage rates (Figure 1.7). In the third quarter of 2023, average prices were about 12% below their peak in July 2022. Given the estimated overvaluation of house prices in 2022 (EC, 2023[6]), the price corrections reflect to some extent a return of prices towards levels that are more aligned with fundamentals. However, a sharper decline in house prices could raise financial stability risks.

Financial vulnerabilities related to high interest rates need to be closely monitored. Household debt has increased rapidly in the last decade on the back of strong mortgage credit growth. Household debt, at around 50% of GDP, is now higher than that of regional peers. At the same time, the banking sector has become more exposed to mortgage credit, with mortgages accounting for over 50% of the banks' loan portfolio. To mitigate the risks to the banking sector, the National Bank of Slovakia (NBS) has introduced a number of borrower-based macroprudential measures since 2018, including loan-to-value, debt-to-income (DTI) and debt-service-to-income (DSTI) limits. In 2023, the NBS adjusted DTI limits for clients older than 40 years, to address the issue of loan maturities exceeding the retirement age. Nevertheless, credit risks have increased recently. The share of mortgages with a DSTI ratio close to the regulatory limit

has risen sharply (NBS, 2023[4]). In addition, many mortgage holders will have to face significantly higher interest rates in the near-term. The share of variable-rate mortgage loans in total loans is below 5%. The typical mortgage rate fixation period is 3-5 years and about 20% of total loans will be refixed in 2024 and 2025. Around half of these loans have rates previously fixed at less than 1% (Figure 1.7). However, the additional mortgage payments due to refixation are moderate, not exceeding 5% of income on average. This is because many mortgages have already been largely paid off. For about 1% of mortgages, the increase in repayments will exceed 20% of income, mainly for young borrowers who bought expensive real estate (e.g. in Bratislava) (NBS, 2023[7]).

Figure 1.7. A high share of mortgages will be subject to markedly higher interest rates in the near-term



Note: Panel A: average interest rate of new loans with interest rate fixation of 1-5 years. Panel B: the numbers in brackets indicate the interest rate range of the existing mortgages.
Source: National Bank of Slovakia (NBS).

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On the corporate side, the commercial real estate sector is most vulnerable to high interest rates. Over two-thirds of corporate loans are variable rate loans. Higher interest rates have contributed to the decline in profitability of firms, but the effect is relatively limited for most firms compared to the effect of the increase in input costs as the ratio of interest expenses to revenues is small (less than 2% on average). However, for the commercial real estate sector interest expenses are a more significant part of overall costs, and the sector faces other headwinds such as the cooling property market and a structural shift towards remote work (NBS, 2023[5]). Exposure of banks to this sector has increased in recent years, with the sector accounting for around a quarter of the corporate loan portfolio. The authorities should therefore closely monitor developments in these retail and corporate market segments and adjust macro-prudential measures if necessary.

The authorities should strengthen financial resilience by boosting financial education and inclusion. The COVID-19 pandemic and the energy crisis have highlighted the need for households and individuals to prepare their finances and enhance their resilience against shocks. Moreover, the ability to manage private pension savings will become more important in Slovakia's rapidly ageing society (see below), while digitalisation will require skills to navigate new digital financial technologies. Consecutive PISA tests have confirmed that the level of financial literacy in Slovakia is significantly below the OECD average, while the share of pupils without even a basic level of financial literacy is significantly above the OECD average (OECD, 2020[8]). To strengthen financial literacy and inclusion, the authorities should continue to measure the level of financial literacy and update the national strategy on financial education. The update could build on OECD and G20 work in the area such as the *G20/OECD INFE Policy Guidance on Digitalisation and Financial Literacy* (OECD, 2018[9]) and *OECD Recommendations on Financial Literacy* (OECD,

2020[10]). The OECD recommendations stress for example the need to base strategies for financial literacy on relevant evidence and analysis, develop and periodically revise a tailored roadmap for the implementation of the national strategy and take into account the needs of specific target groups such as older and vulnerable groups. The strategy should also consider the use of digital technologies that can potentially facilitate the effective provision of financial education and extend its reach, as pointed out in the *OECD/INFE Guidance on digital delivery of financial education* (OECD, 2022[11]).

Addressing fiscal challenges to ensure debt sustainability

Shifting from crisis response to fiscal prudence

The fiscal position has considerably weakened since 2019. The response to the COVID-19 pandemic, along with permanent expansions of pension and family benefits, led to large fiscal deficits of over 5% of GDP in 2020 and 2021. The deficit temporarily narrowed to 2% of GDP in 2022, thanks to the phasing out of pandemic support measures and buoyant tax revenues. However, in 2023 the fiscal stance has become highly expansionary again partly in response to the energy crisis, which affected households and firms mainly in 2023 due to the delayed pass-through of global energy prices to regulated electricity, gas and heating prices. The authorities earmarked EUR 3.8 billion (3.3% of GDP) to mitigate the impacts of the energy crisis on households and firms, although actual spending is estimated to have been lower, at around 2.4% of GDP in 2023. Measures included for example capped energy prices for households as well as partial reimbursements of the energy bills of firms (Table 1.3). These measures were partly re-financed by redirecting around EUR 1 billion of unused EU structural funds of the 2014-2020 programming period to finance energy measures, and by temporary revenues from the EU Excess Profits Regulation. Moreover, the budget for 2023 also included permanent increases in expenditure not directly linked to the energy crisis such as higher family benefits (1.1% of GDP), including increased child allowances and tax credits, as well as VAT reductions in the gastronomy and sports sector (0.2% of GDP). These VAT reductions are neither targeted nor efficient and should be reversed (see below). As a result of the expansionary fiscal policy in recent years, the public debt-to-GDP ratio has surged by more than 10 percentage points to 57.8% of GDP in 2022. While the public debt level remains below the EU reference value of 60% of GDP, it is unprecedented in Slovak history (Figure 1.8).

Medium- to long-term fiscal spending pressures are large and threaten fiscal sustainability. Defence spending will increase closer to the NATO target of 2% of GDP in the medium-term (MOF, 2023[13]). The indexation of various social benefits to past inflation will also add to spending pressures in the next years. More importantly, both the European Commission and the domestic fiscal council assess Slovakia's long-term sustainability situation as high risk. This is mainly due to Slovakia's rapidly ageing population, with the ratio of people aged 65 and over to the working-age population almost doubling in the next 30 years and surpassing the EU average by 2050. Official projections suggest that ageing-related spending, notably on pensions, health care and long-term care, could increase by almost 7 percentage points of GDP by 2070, one of the largest increases in the EU. Without measures to contain ageing-related costs, debt would rise to over 200% of GDP by 2050 (Figure 1.9, *baseline scenario*). In contrast, ambitious fiscal consolidation of about 5.5% of GDP over the next 5 years combined with structural reforms as recommended in this *Survey* (Box 1.2) would bring debt on a downward trajectory towards the debt target of 40% (Figure 1.9, *reform and 5.5% consolidation scenario*). Slightly more moderate consolidation of 4.5% of GDP over the next 5 years would lead to a stabilisation of debt at the current level.

Fiscal consolidation should start in 2024 to rebuild fiscal buffers and support the disinflationary process while allowing for targeted support to those not sufficiently covered by the social safety net despite the increase in benefit levels. Some untargeted energy support measures such as electricity, gas and heating price caps for households were extended to 2024, costing around 1% of GDP. With energy and commodity prices below their peaks of 2022, broad and untargeted policy support should be phased out and unspent

resources allocated for energy support measures should be used to reduce public debt. Recent increases in minimum wages and welfare benefits, either through discretionary compensation for past inflation (e.g. minimum wage) or automatic indexation to it (e.g. pensions), will provide necessary support to many vulnerable households, with the advantage of not lowering marginal energy prices or weakening incentives to reduce energy use. However, providing support only to existing welfare recipients may be insufficient. Other sources of vulnerability may be related to the energy efficiency of the dwellings or high energy needs due to age, illness or geographical factors.

Table 1.3. Government policies in response to the energy crisis and the war in Ukraine

Measure	Description	Fiscal cost in 2022 (million EUR)	Fiscal cost in 2023 (million EUR)
Households			
Income support for vulnerable HH	2022: Payment of a 14th pension, one-off child and newborn benefits, one-off payment for low-income households. 2023: Inflation compensation for pensioners (extraordinary valorisation of pensions, increase in minimum pensions).	340	500
Energy price caps and support	Gas price increases capped at 15% and heat price increases at 20%, with the government reimbursing the provider for the difference to the actual price. Electricity prices are frozen at 2022 level without government compensation thanks to an agreement with the power provider. However, the government covers distribution and system charges. Energy bill compensation for selected "vulnerable customers"(e.g. in social housing).		2517
Firms			
Energy price support	Compensation of 80% (100% for small firms) of energy bill if electricity price exceeds EUR 199 per MWh and gas prices exceeds EUR 99 per MWh. Support for energy-intensive firms through reduction of the Tariff for System Operation. Support for primary agricultural production and storage.	128	490
Support for Ukrainian refugees	Includes accommodation allowance and support for pupils' education.	143	90
Humanitarian and military aid [1]		23	

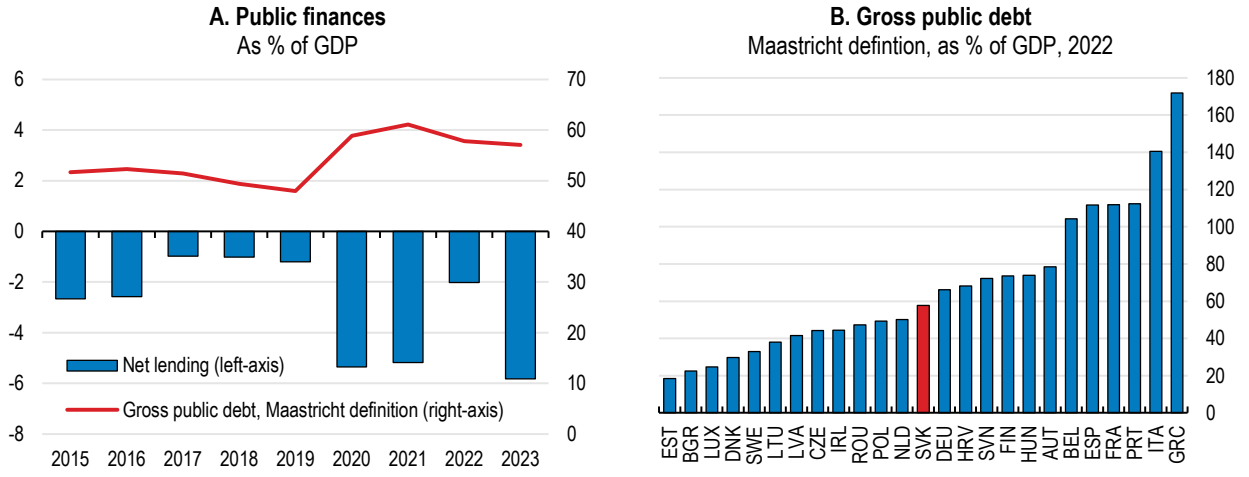
1. Does not include military equipment donations.
Source: Based on (MoF, 2023[12]), Tables 9 and 10.

Improving the public data infrastructure and further digitalising the government can help better target social benefits. There is a need to enhance data collection and link existing databases across the government. For example, as personal income taxes are levied at the individual level, information on household income is generally lacking. Households have to apply for means-tested welfare benefits targeted at the household level as eligibility is not automatically assessed. Moreover, while information on the energy efficiency of buildings exists, such information is not available for individual apartments within buildings, and cannot be linked to income data. The sharing and linking of existing databases across ministries and levels of government is hampered by data protection and IT concerns. Strengthening coordination across government agencies, improving database interoperability and IT infrastructure, and overcoming legal and regulatory obstacles (while adequately protecting privacy) would facilitate targeting policy programmes and raise the quality of public spending. The availability and combination of different datasets is key to better targeting (Hemmerlé et al., 2023[14]).

The planned fiscal consolidation is insufficient to stabilise debt at current levels. In December 2023, parliament approved a budget for the year 2024 which targets a reduction of the general government budget deficit from 6.5% of GDP in 2023 to 6% of GDP in 2024. The budget includes consolidation measures summing to around 1.5% of GDP but also introduces additional expenditures. The consolidation measures are largely focused on the revenue side and include higher taxation of tobacco and alcohol,

higher social security contributions for health insurance, higher taxation of banking profits, extension of the taxation of excess profits to the oil industry. At the same time, the budget also includes extra spending for the increase of the 13th pension, tax benefits for mortgage payments and the extension of untargeted energy support measures. The government targets a reduction of the budget deficit to 5% and 4% of GDP in 2025 and 2026, respectively, but consolidation measures to achieve these targets have not been specified. Under this budget deficit path, the public debt-to-GDP ratio will continue to increase above 60% of GDP. To stabilise debt below 60% of GDP in the near-term, a more ambitious consolidation path with an annual improvement of the primary structural balance of closer to 1% of GDP per year is needed.

Figure 1.8. The fiscal position has deteriorated



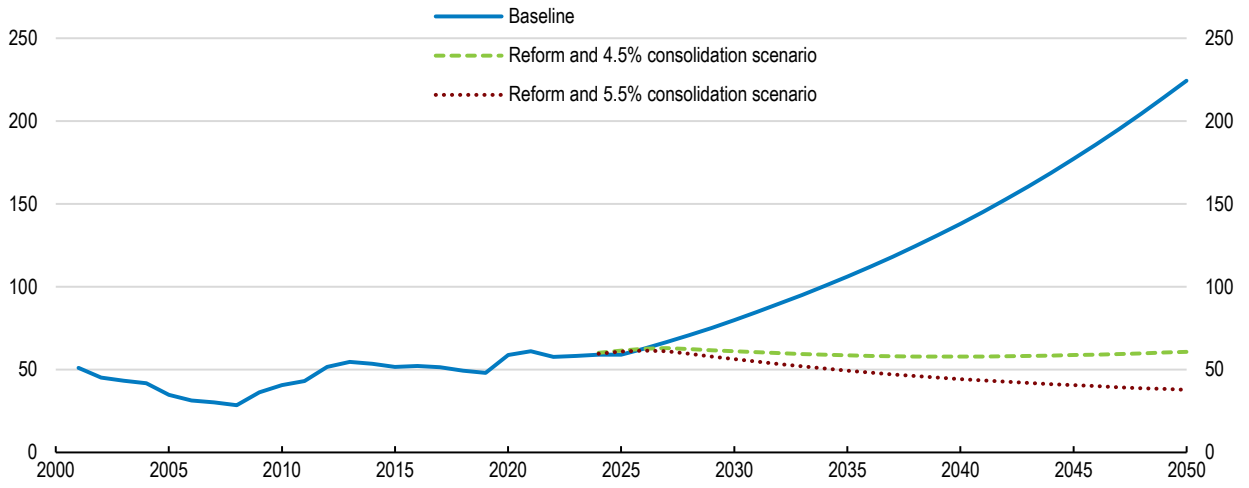
Note: Panel A, 2023 data refer to projections.
Source: OECD Economic Outlook: Statistics and Projections database.

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The fiscal consolidation strategy should focus on reducing expenditures given Slovakia's tax burden, while avoiding harming growth and equity. The consolidation strategy should draw on recent and future spending reviews, which identify spending efficiency potential without harming outcomes. Over a dozen spending reviews have been completed since 2016, but savings measures have not been systematically implemented in the budget. A recent spending review on subsidies identified annual savings potential of around 0.3% of GDP, mainly by abolishing environmentally harmful fossil fuel subsidies (MoF, 2023[15]). Potential savings have also been identified in health care, amounting to around 0.4% of GDP, in particular in the area of pharmaceuticals (e.g. strengthening cost-effectiveness evaluations of pharmaceuticals that are fully reimbursed, promoting generics) (MoF, 2022[16]). Furthermore, family benefits have increased substantially in recent years and should be carefully evaluated, especially to avoid disincentives for mothers to take up work. Moreover, an assessment of the latest family package in place since 2023 shows that the increase in benefits is not well targeted to households most in need, with less than 10% of the total expenditures going to households at risk of poverty (MoF, 2023[17]). Addressing the pressures from ageing is paramount. For instance, further measures are needed to improve the sustainability of the pay-as-you-go public pension system. The Ministry of Finance presented a menu of consolidation measures in October 2023, consisting of close to 100 measures in the amount of 7% of GDP (MoF, 2023[18]). Substantial inflows from the EU Resilience and Recovery Facility as well as EU structural funds from the new programming period, provide an opportunity to pursue ambitious consolidation without harming crucial investments for education and health as well as to accelerate the digital and green transitions. On the revenue side, priority should be given to broadening tax bases, reducing tax expenditures and improving collection.

Figure 1.9. Stylised debt scenarios

General government debt, as a percentage of GDP



Note: The "Baseline scenario" is based on the OECD Economic Outlook 114 database with updates until 2025 and the OECD Long-Term Economic Model thereafter. Increases in ageing-related costs are not offset and are based on the EU Ageing Report 2021 and Ministry of Finance. The "Reform and 5.5% (4.5%) consolidation scenarios" are based on the OECD Long-Term growth Model and reform scenario outlined in Box 1.1, which implies a 0.5 p.p. higher real GDP growth rate on average over the projection period compared to the baseline scenario. In addition, the scenario assumes an improvement of the primary balance by 1.1 p.p. (0.9 p.p.) of GDP per year between 2023 and 2028.
Source: OECD Long-term Economic Model; EU Ageing Report 2021; Ministry of Finance.

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The adoption of multi-annual expenditure ceilings in 2022, as recommended in the previous *Survey* (OECD, 2022[19]), will enhance the credibility of the fiscal consolidation strategy (Box 1.3). The adoption of multi-annual expenditure ceilings strengthens incentives to incorporate expenditure reviews into the budgetary planning process. The rules are designed in a way that supports countercyclical fiscal policy. Nominal level ceilings constrain spending in boom times when revenues are high, while excluding expenditures driven by the economic cycle, such as unemployment benefits, allows automatic stabilisers to operate during downturns. Moreover, by excluding EU-related co-financing of investment, the rules also safeguard a significant part of public investment. The ceilings will become binding in 2024. They will be set to imply an annual structural consolidation of around 0.5% of GDP per year relative to a no-policy-change scenario, given Slovakia's high long-term debt sustainability risk (Box 1.3).

Reforms of the national debt rule are still pending parliamentary approval. Under the current debt rule, the gross debt ceiling is 45% of GDP in 2023 and is set to gradually fall to 40% of GDP by 2028. As the debt level significantly exceeds the national target, the rule in principle requires the government to present a balanced budget for 2024. However, since a new government was formed in October 2023, this requirement to present a balanced budget is waived for two years. Under the proposed modified debt rule this requirement would be waived by one year. As detailed in the previous *Survey*, other proposals to reform the debt rule include a switch from gross to net debt targets by adjusting for financial assets to facilitate public debt and liquidity management. The net debt target would be set at 44% of GDP in 2023 and gradually fall to 35% in 2035. Moreover, the reforms would include stricter sanctions if net debt exceeds the target but also modify the escape clause of the rule to provide greater flexibility in times of crisis or severe downturns. It will be important to ensure that the reformed debt rule and the expenditure rule are aligned, by linking the two rules and establishing consistent and transparent escape clauses.

Box 1.2. Quantifying the impact of selected policy recommendations

Table 1.4 presents estimates of the fiscal impact of selected recommendations. The results are indicative and do not allow for behavioural responses. Moreover, revenue gains from the recommended reform package via higher employment are not included. The employment rate increases by 1.8 percentage points by 2034 relative to the baseline.

Table 1.4. Illustrative fiscal impact of recommended reform package

Fiscal saving (+) and costs (-) after 10 years

	% of GDP
Spending measures	
Boosting active labour market policies	-0.2
Increasing spending on early childhood education and care	-0.25
Increasing government support for business R&D	-0.15
Expanding social housing and housing allowances	-0.2
Canceling inefficient subsidies (e.g. fossil fuel subsidies)	+0.3
Enhancing efficiency of health care spending (esp. on pharmaceuticals)	+0.4
Tightening early retirement options, cancelling the parental bonus and the 13th pension for high pensions	+0.9
Better targeting family benefits and reducing the duration of parental leave	+0.5
Total spending measures	*+1.3*
Revenue measures	
Reducing the labour tax wedge, financed by higher immovable property and environmental taxation	0.0
Improving tax collection and removing VAT exemptions and reduced rates	+0.9
Higher taxes on unhealthy products	+0.3
Total revenue measures	*+1.2*
Total budgetary impact	**+2.5**

Source: OECD and (MoF, 2023[18]).

Table 1.5 quantifies the GDP impact of the main recommendations based on the OECD Economics Department long-term model.

Table 1.5. Illustrative impact of reform package on GDP per capita

Relative to baseline

Reform	10 year effect	Effect by 2060
Labour and educational reforms: i) expanding pre-school funding per child; ii) expanding active labour market policies; iii) reducing the average tax wedge; iv) tightening early retirement options	2.7%	3.9%
Increasing research and development spending	0.6%	4.6%
Improving the rule of law	0.7%	6.0%
Enhancing the quality of public investment spending	0.5%	2.0%
Total impact	**4.7%**	**17.3%**

Note: The total impact of reforms is not equal to the sum of the separate reforms because of interactions between reforms. Reforms to improve the rule of law include measures to strengthen the anti-corruption framework. Enhancing the quality of public investment spending includes measures to increase the benefit-cost ratios of investment spending.
Source: OECD Economics Department Long-Term Model.

Box 1.3. The fiscal framework in Slovakia

Debt rule

The national debt rule has been in place since 2012 and is part of the constitutional law on budgetary responsibility. The ceiling was initially set at 50% of GDP and has been decreasing over time.

Ceiling: In 2024, the gross debt (Maastricht definition) ceiling will be set at 44% of GDP. The ceiling is set to gradually fall by 1 percentage point per year to 40% of GDP in 2028.

Sanction bands: If debt exceeds the ceiling, sanctions apply according to five sanction bands (as of 2024): 1) 44-47% of GDP: the Ministry of Finance must propose measures to reduce debt; 2) 47-49% of GDP: salaries of government members are frozen at the previous year level; 3) 49-51% of GDP: expenditures (excluding some such as debt service and EU funded expenditures) have to be cut by 3% in the current year and expenditures are frozen at this level in the following year; 4) 51-54% of GDP: the following year's general government budget has to be balanced or in surplus; 5) above 54% of GDP: a vote of confidence in the parliament is triggered.

Escape clause: sanctions will not apply in case of war. In addition, the strictest sanctions (bands 3-5) do not apply a) for 2 years after the Manifesto of the new government is approved by the Parliament; b) for 3 years if year-on-year GDP growth falls by 12 percentage points, c) for 3 years if the response to a banking crisis, a natural disaster or international treaties require additional expenditures of more than 3% of GDP.

Expenditure rule

In March 2022, the Slovak parliament approved amendments to the budgetary law that introduce expenditure ceilings. In December 2022, the Ministry of Finance and the independent fiscal council agreed on a methodology to compute the ceilings. The computation of the ceilings is under the responsibility of the fiscal council. The fiscal council will update the ceilings after the approval of the new government's manifesto. The ceilings will become binding from 2024.

The expenditure ceilings are set for the four-year parliamentary term. They are based on the fiscal council's long-term fiscal sustainability indicators. If long-term sustainability risks are considered medium/high, as is currently the case, expenditure ceilings are set in line with an annual improvement of the structural budget balance of 0.5% of GDP compared to a no-policy-change scenario, given tax revenue forecasts. If long-term sustainability risks are considered low, the required annual improvement of the structural budget balance is 0.25% of GDP. A larger structural consolidation and hence lower spending ceilings may be required if public debt deviates significantly from the national debt rule, in line with the sanction bands of the debt rule.

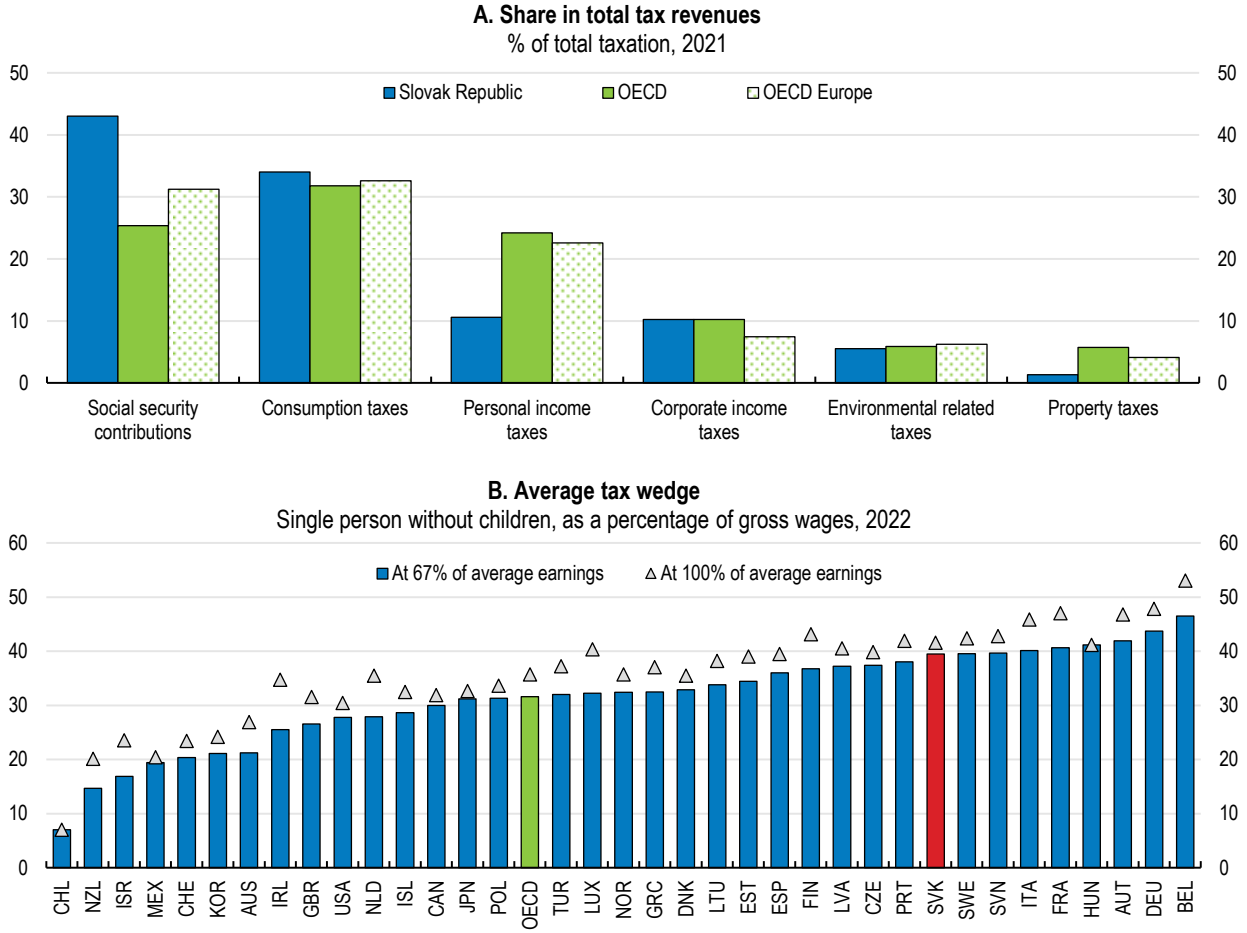
The expenditure ceilings cover about 80% of total government spending. They exclude: i) debt service spending, ii) local government expenditures, iii) EU-related expenditure including investment co-financing, iv) expenditures driven by the economic cycle, such as part of unemployment benefits, and one-offs.

The spending ceilings are updated annually to reflect new government measures, non-compliance with the rule in the previous year or significant deviations of tax revenues from forecasts. If the government violates the expenditure rule by more than 1% of GDP for two consecutive years, a vote of confidence in the parliament is triggered.

Making the tax system more growth and environmentally friendly

The tax mix puts a high burden on labour. The overall tax burden increased over the past decade, and the tax revenue to GDP ratio, at 35.4% of GDP in 2021, is slightly above the OECD average (34.2% of GDP). Slovakia relies significantly more on social security contributions and much less on property taxation than other OECD countries (Figure 1.10, Panel A). As a result of the high social security contributions, the average tax wedge – the gap between the net take-home pay of workers and their costs to employers – is high in international comparison. In 2023, the government increased the child tax credit and child allowances, lowering the tax wedge for families and further increasing the already substantial fiscal preference for families with children compared to other OECD countries (OECD, 2023[20]). However, the tax wedge remains high for single households and low-income earners (Figure 1.10, Panel B), with likely negative effects on the employment of low-skilled workers. The new government plans to increase health insurance contributions, further increasing the tax wedge.

Figure 1.10. Revenues rely heavily on social security contributions and the tax wedge is high



Note: The OECD and OECD Europe aggregates are an unweighted average of the countries in the group. In Panel B, the tax wedge is the sum of personal income tax and employee plus employer social security contributions together with any payroll tax less cash transfers, expressed as a percentage of labour costs for a single person (without children) on average earnings.
Source: OECD Global Revenue Statistics database; OECD Environmental policy database; and OECD Taxing wages database.
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A tax reform with the aim of shifting the burden from labour to property, environmentally harmful activities and unhealthy products has the potential to reduce distortions to economic growth (Arnold et al., 2011[21]). Such a shift would make the tax system also more resilient to the effects of ageing. As discussed in detail

in *Chapter 2* the government should increase revenues from recurrent taxes on immovable property and change the tax base to market values. The tax design can make higher property taxes more politically acceptable, for example by introducing tax deferrals for liquidity-constrained households or some progressivity through tax exemptions or credits (see *Chapter 2* for details). Higher revenues from property taxation together with reducing the tax benefits for owner-occupied housing and higher environmental taxation would help to create room to lower the tax burden on labour. As discussed below, environmental taxes should increase and be adjusted to ensure a more consistent pricing of carbon and other pollutants across fuels and uses to ensure cost-efficient emission reductions. The landfill tax should also increase to reduce the share of waste in landfill, which remains significantly above the OECD average (OECD, 2022[22]). Moreover, environmental taxes should be regularly adjusted with inflation, and energy tax exemptions should be phased out while protecting the most vulnerable through targeted income support measures. Finally, preventable mortality is high reflecting *inter alia* behavioural risk factors (OECD, 2022[19]). For example, smoking prevalence and alcohol consumption remain above the OECD average, and the share of overweight and obese people has increased significantly in recent years (OECD, 2023[23]). This calls for higher taxation of unhealthy products such as alcohol, tobacco or sweetened beverages.

There is room to further improve VAT collection, notably by improving compliance and reversing exemptions and reductions granted in recent years. According to the VAT Revenue Ratio indicator (OECD, 2022[24]), in 2020 Slovakia lost a slightly higher proportion (49%) of its potential VAT revenues than OECD countries on average (44%) due to VAT exemptions, reduced rates, weak enforcement or VAT non-compliance. A reduced VAT rate of 10% and exemptions exist for a number of goods and services, such as certain food items and accommodation services. In 2023, reduced VAT rates were extended to catering, sports venues, ski lifts, indoor and outdoor sports and fitness facilities, with a budgetary cost of 0.2% of GDP. Evidence suggests that firms have not passed on the VAT cut to final consumers (NBS, 2023[25]). More generally, VAT exemptions or reduced rates should be reversed as they are poorly targeted and inefficient, benefitting all households, including the affluent. Furthermore, differential VAT rates provide opportunities for tax evasion by re-classifying goods to benefit from lower rates.

Given the significant consolidation needs, an increase of the standard VAT rate may be needed. The VAT rate is 20%, which is around the OECD average but lower than in neighbouring Czechia (21%), Hungary (27%) and Poland (23%). A VAT rate hike is easy to implement, and the revenue gains could be substantial. For example, an increase by 2 percentage points could increase revenues by around EUR 1 billion (0.9% of GDP) (MoF, 2023[18]). However, a higher VAT rate would increase incentives to evade the VAT tax. Moreover, raising VAT revenues through base broadening instead of rate increases tends to be more growth-friendly (Acosta-Ormaechea and Morozumi, 2021[26]).

Progress in tackling tax evasion and improving tax compliance continues. The VAT compliance gap continues its downward trend (from over 30% in 2013 to 13.9% in 2020) but remains above the EU average of 9.1%. Despite some simplifications to the tax registration system for new companies, the digitalisation of the tax administration is progressing only slowly (EC, 2023[27]). The introduction of electronic invoicing, originally scheduled for 2022, has been postponed. Efforts should also continue to reduce compliance costs (e.g. via electronic pre-filling of income tax returns or education programmes for SMEs). Facilitating compliance could create scope to reduce the VAT registration and collection threshold, which is comparatively high in Slovakia (OECD, 2022[24]). A number of OECD countries combine a low VAT registration and collection threshold with simplified procedures to calculate the VAT liability for SMEs, such as presumptive tax schemes.

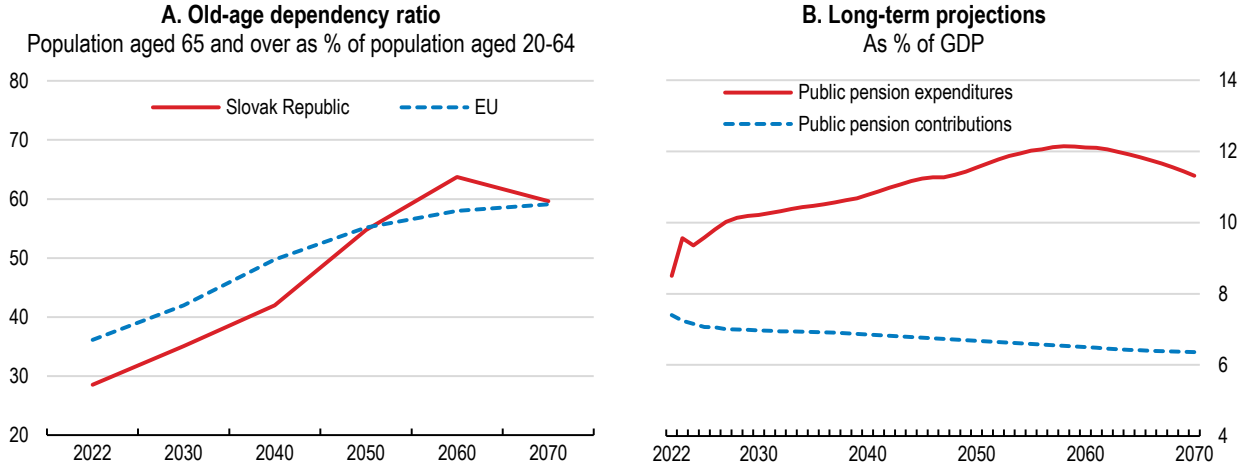
Table 1.6. Past key recommendations on fiscal framework and tax policies

Recommendations in previous Surveys	Actions taken since 2021
Strengthen the rules-based fiscal framework by implementing multiannual expenditure ceilings while adjusting the escape clause of the debt rule to allow flexibility in times of crisis.	In March 2022, the Slovak parliament approved amendments to the budgetary law that introduce expenditure ceilings. In December 2022, the Ministry of Finance and the fiscal council agreed on a methodology.
Reduce the tax wedge in particular for low-income earners. Shift the tax mix towards property and environmental taxes.	Income tax benefits (child tax credits) for families with children were raised in 2022 and 2023.

Improving pension sustainability

Slovakia's population is ageing rapidly. The share of the working-age population is expected to shrink by about a fifth between 2022 and 2050 while the share of the population aged 65 and above will almost double (Figure 1.11, Panel A). Projections suggest that pension expenditures will increase by around 3.6% of GDP by 2060. As discussed in detail in the previous *Survey*, one of the main levers to mitigate spending pressures is to extend working lives. The effective retirement age is among the lowest in the OECD (Figure 1.12), reflecting a currently relatively low statutory retirement age together with the possibility to retire early and other pathways into early retirement such as disability pensions.

Figure 1.11. Rapid population ageing puts pressure on pension spending



Note: Panel B, public pension expenditures include armed forces schemes.
Source: European Commission 2024 Ageing Report, Underlying Assumptions and Projection Methodologies; and the Ministry of Finance of the Slovak Republic.

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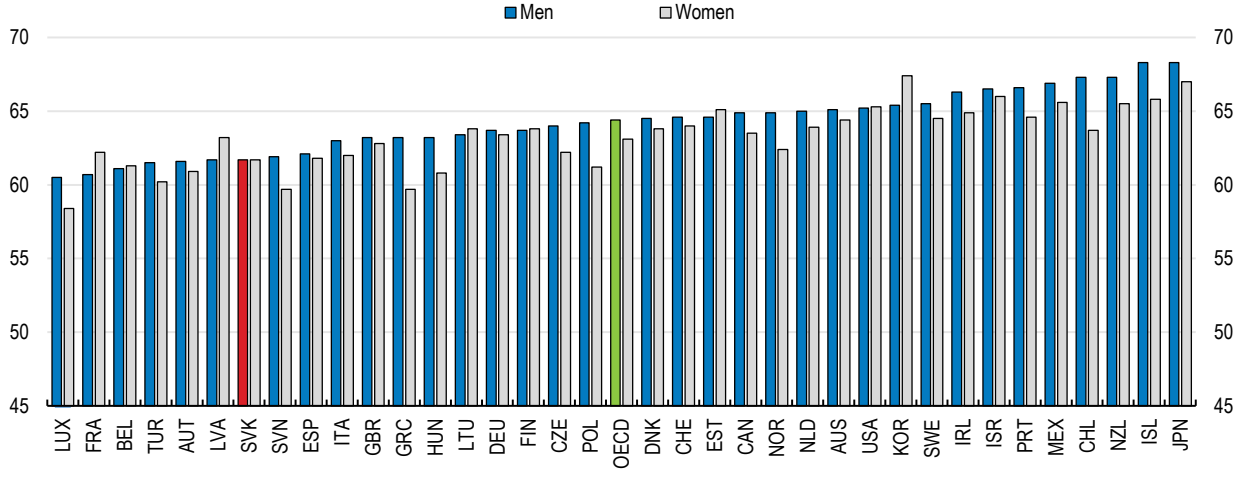
Recent pension reforms have had an overall positive impact on the sustainability of the public pay-as-you-go system but a large funding gap remains. In 2022, the statutory retirement age was re-linked to life expectancy as recommended in the previous *Survey.* This will be effective from 2030. Until 2030 the statutory retirement age will gradually increase from currently 63 years to 64 years. Moreover, the growth of future pension benefits has been slowed, by reducing the growth of the pension point value (95% of average wage instead of 100%). However, the positive impact of these reforms on pension sustainability has been partly offset by the introduction of an additional early retirement option after 40 years of contributions as well as the introduction of the so-called parental bonus. The parental bonus is a pension supplement to parents in the amount of 1.5% of each child's social security base. As discussed in the previous *Survey,* the parental bonus raises efficiency and equity issues, as the bonus favours parents of more affluent children, and is fiscally costly (0.3% of GDP per year). The authorities should therefore consider cancelling the parental bonus to improve pension sustainability, although such a change would require a constitutional majority in the parliament. Overall, the recent pension reforms are estimated to

have improved the sustainability of the public pensions system by around 2% of GDP by 2070, or around a third of the funding gap (MOF, 2023[13]). Nevertheless, a significant pension sustainability gap remains (Figure 1.11, Panel B).

Pathways to early retirement should be tightened. The new scheme of retirement after 40 years of contributions adds another pathway to early retirement to the already existing scheme that allows retirement two years before the statutory retirement age. The penalties for retiring early differ between the two schemes. The penalty amounts to 3.9% per year before reaching the statutory retirement age in the new scheme and around 6.5% per year in the previous scheme. The penalties for the two early retirement options should be equalised and aligned with what is implied by actuarial neutrality. The actuarial neutrality should also be regularly re-assessed. Moreover, the minimum contribution requirement should increase in the future in line with increases of the statutory retirement age to avoid negative effects on growth and people leaving the labour market with low pension entitlements. For instance, Belgium and France have recently increased the minimum contribution requirement reflecting gains in life expectancy. Finally, the early retirement option for mothers should be phased out. Currently, women are allowed to retire 6 months earlier for each child (up to three children), without penalties. This harms the sustainability of the pension system and lowers pension incomes for women. To ensure that older workers remain in employment it is important to strengthen incentives for them to participate in adult learning and facilitate access to part-time work and flexible work arrangements (OECD, 2022[19]). Finland, for example, has implemented flexible working hour schemes for older workers. In Sweden, job rotation schemes have been developed to tailor tasks to the personal situation of older workers.

Figure 1.12. The effective labour market exit age is among the lowest in the OECD

Effective labour market exit ages by sex, 2022



Source: OECD Pension at a Glance database.

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Access to disability pensions needs to be reformed. Nearly 10% of older workers withdraw full disability benefits (Fodor, Roehn and Hwang, 2022[28]). The share of people withdrawing disability benefits is relatively high compared to peer countries with similar health outcomes such as Poland, Hungary, and the Czech Republic. This reflects less stringent assessment criteria, which have not been updated since 2004. A recent reform expands the list of diagnoses and criteria, further easing access to disability benefits. Instead, the government should shift the focus from evaluating incapacity to work towards assessing the remaining work capacity as done in an increasing number of OECD countries. In addition, work rehabilitation should be further developed and made mandatory for receiving disability pensions as in Luxembourg, Switzerland, New Zealand, Norway and Sweden.

Pension contribution rates and the labour tax wedge are relatively high, suggesting limited room to increase pension contributions. Nevertheless, the authorities should raise the pension contribution base of the self-employed to better harmonise contributions and entitlements between employees and the self-employed workers with similar earning (OECD, 2022[19]). At the same time, the authorities could consider financing some of the redistributive elements of the pension system via the general taxation. The pay-as-you-go pension system is highly redistributive, weakening the link between pension contributions and entitlements (OECD, 2022[19]). Financing some of the redistributive elements via general taxation could help improve the finances of the pension system and allow to lower social security contributions.

On the benefit side, gross replacement rates are around the OECD average. Net replacement rates are somewhat above the OECD average, mainly reflecting a generous tax treatment of pensions - pension contributions are tax deductible and benefits are fully exempt from taxes and social security contributions. This is an uncommon tax treatment in OECD countries. Relative poverty rates of people aged 65 and above are low in international comparison (OECD, 2023[29]). The authorities could consider taxing pension benefits under the personal income tax (PIT) schedule although such a change would face political economy challenges. The progressivity of the PIT would ensure that low pensions remain tax exempt. In addition, automatic adjustments to pension benefits could be introduced. This could help ensure financial sustainability, reduce the need for recurrent discretionary adjustments and improve the predictability of future pension entitlements. For example, Finland links pension entitlements to life expectancy. In Germany, which also has a point-based pay-as-you-go system, the pension point value is linked to the ratio of contributors to pensioners. Finally, the authorities could cancel the 13th pension for high-income earners. However, the new government increased the 13th pension for all pensioners.

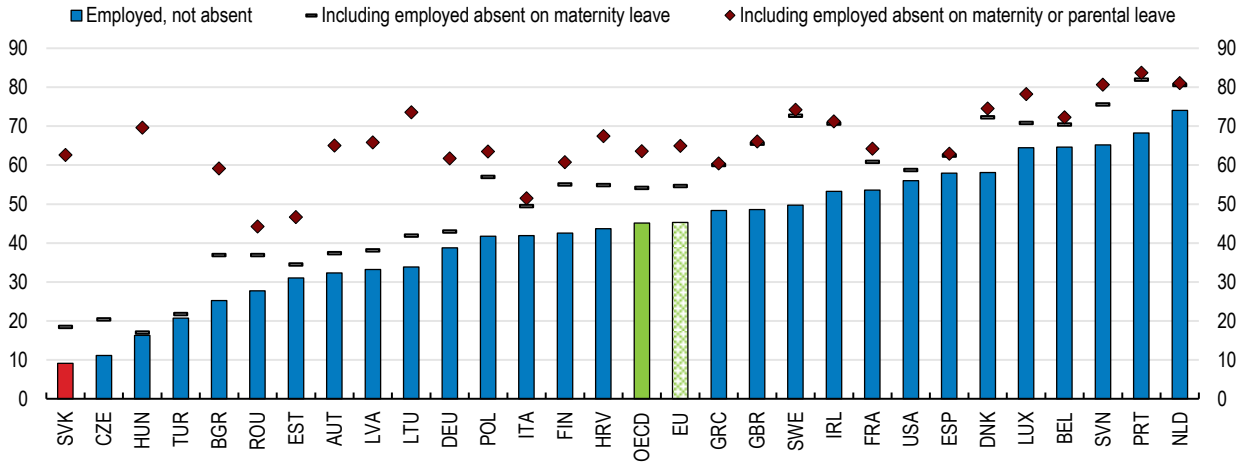
Reforms to the private, fully-funded, defined-contribution pension system in 2022 (“Pillar II”) will improve pension yields in the future and are in line with recommendations in the previous *Survey*. As detailed in the previous *Survey*, the private pension suffers from low yields, making it inefficient in providing additional pension income. Recent reforms include most importantly a change towards automatic enrolment into the system for employees under the age of 40 (with the possibility to opt out), and the introduction of default life-cycle investment strategies. According to the default life-cycle based investment strategies, the pension funds will allocate a higher share of the individual pension savings into global equities. This, together with a change in pension fund fee regulations, should improve the very low returns of the private pension funds (OECD, 2022[19]). However, at the end of 2023, the parliament adopted legislation to reduce pension contributions to the private system, reducing future pension income from this second Pillar.

Raising employment of mothers with young children

The employment rate of mothers with young children is low in Slovakia (Figure 1.13). While the employment rate of women is overall high, it falls markedly for several years after childbirth. Long absences from the labour market during childbearing age impact women’s subsequent careers, and the gender wage gap is sizeable. Shorter careers and the labour income gap contribute to lower pension income. Family benefits need to be reviewed, in particular the balance between cash benefits (e.g. parental leave allowances) and in-kind benefits (e.g. early childhood education and care), with a view to reducing disincentives for mothers with young children to work outside the home. Increasing employment rates of mothers would help mitigate the impact of a shrinking work force with likely positive effects on tax revenues. Recent research also points to a more significant impact of the provision of affordable childcare on fertility compared to parental leave policies (Doepke et al., 2022[30]).

Figure 1.13. The employment rate of mothers with young children is low

Employment rates for women with children aged 0-2, by maternity/parental leave status, %, 2021 or latest available year



Source: OECD Family database, https://www.oecd.org/els/family/database.htm.

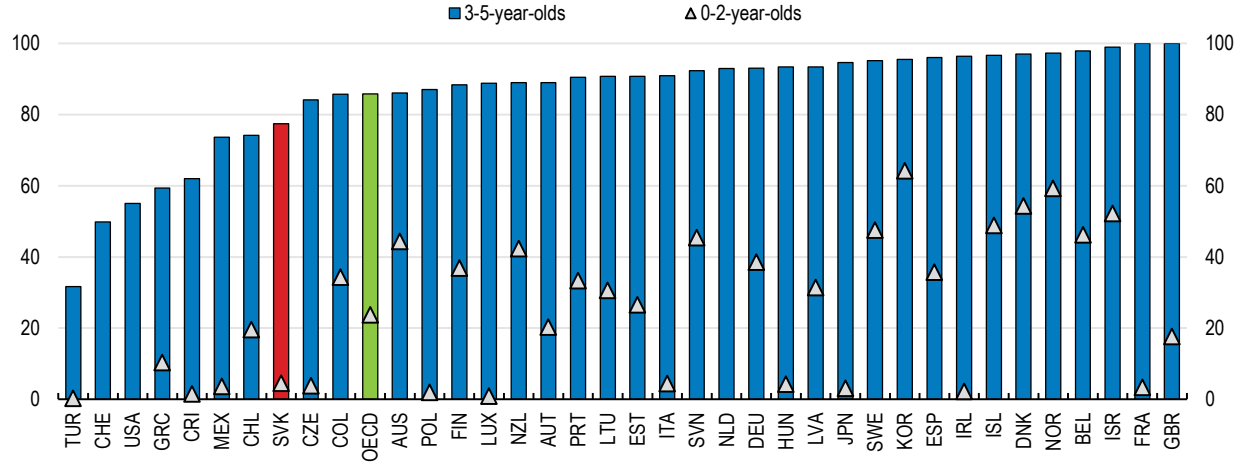
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Further improving access to high-quality early childhood education and care (ECEC) should remain a key priority. The participation rate of children in pre-school education has increased but remains substantially below EU and OECD averages especially for children under the age of 3 (Figure 1.14). Enrolment in ECEC is also highly heterogeneous. The enrolment rate of 3-5-year-olds in households that receive "assistance in material need" and households from the marginalized Roma community are substantially lower (OECD, 2022[19]). Besides facilitating mothers' participation in the labour market, access to high-quality ECEC has a strong positive impact on the development of children from vulnerable groups, provides a crucial foundation for future learning, and raises equality of opportunity (e.g. (OECD, 2021[31]), (Drange and Havnes, 2019[32])). This is especially crucial for Slovakia, where the impact of socio-economic background on student performance is the strongest in the OECD (OECD, 2019[33]). Pre-primary education has become mandatory for 5-year-olds from the 2021/22 school year, and the legal entitlement will be expanded to 4- and 3-year-olds from school years 2024/25 and 2025/26, respectively.

Increasing participation in ECEC will require improving affordability and expanding the supply of high-quality childcare places. Reducing the childcare fee for low-income earners or increasing the childcare allowance (i.e. a subsidy for the childcare fee) would significantly improve affordability of ECEC while increasing work incentives for mothers (OECD, 2022[19]). Besides affordability, insufficient supply of places, in particular in municipalities with a high share of Roma population, contributes to low enrolment rates ((MoF, 2020[34]); (OECD, 2019[35]), (OECD, 2020[36])). Further investment in pre-school facilities, as planned in the Recovery and Resilience plan, is crucial to ensure high-quality pre-school education in light of the planned expansion of the legal entitlement to 3- and 4-year-olds. Raising awareness of the positive long-term effects of pre-primary education and building trust through relationships with parents, especially in Roma communities, is key to ensure participation of disadvantaged groups. Designated contact persons, who are trained and equipped with necessary language skills, could help with administrative requirements for enrolment (OECD, 2020[37]).

Figure 1.14. Enrolment in pre-school education is low

Enrolment rates of children in early childhood education and care, %, 2021 or latest available year



Source: OECD Education database.

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Very long parental leave discourages women from returning to work. Parental leave, which follows maternity leave, is 130 weeks (i.e., 2.5 years) in Slovakia, more than four times longer than the OECD average (Figure 1.15). While both parents can take parental leave, over 97% of parental leave beneficiaries were women on average during the period 2020-22 according to data from the Ministry of Labour. Moreover, while mothers can decide when to return to work during the duration of parental leave, about half of them took the maximum duration of parental leave in 2019. Very long leave periods for women reduce chances of re-entering the labour market and lead to severe negative consequences for career progression as well as earnings mobility over the life course (e.g. (Thévenon and Solaz, 2013[38])). Paid parental leave should therefore be gradually shortened and part of the parental leave should be made conditional on the second parent's participation in households with two parents. While mothers can in principle combine work and the parental allowance, few do so in practice. As analysed in detail in the previous *Survey* (OECD, 2022[19]), this is mainly due to high childcare fees (especially for nurseries), resulting in a high participation tax especially for low income earners. It is therefore important that reforms of parental leave are accompanied by a significant increase in high-quality affordable ECEC facilities. Alternatively, the childcare allowance, which is a subsidy of childcare fees and only available to working parents, could be made more financially attractive relative to the parental leave allowance.

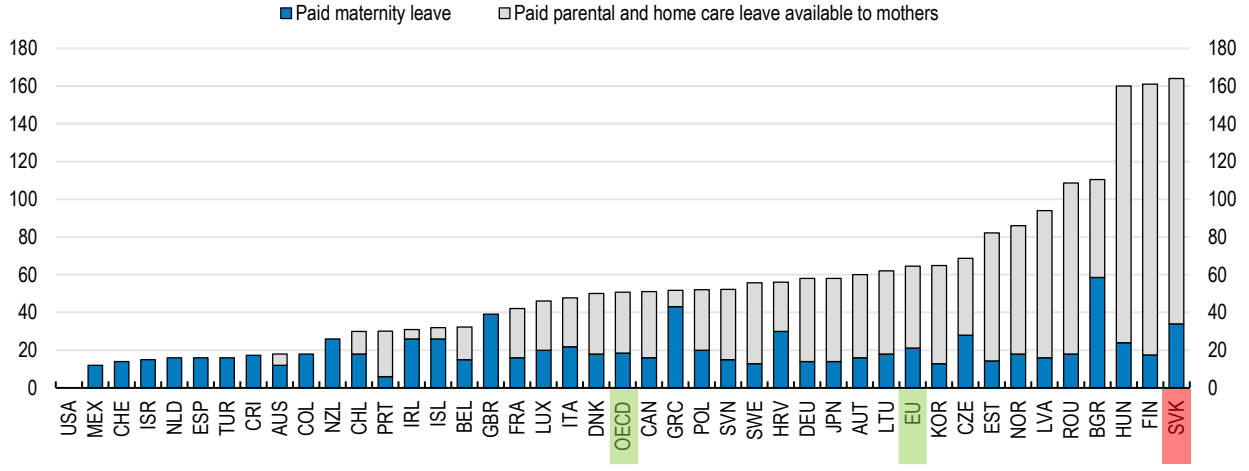
Increasing the flexibility of working arrangements can help mothers (re-) enter the labour market. The part-time employment rate is one of the lowest in the OECD at 2.9%, compared to the OECD average of 16.1% in 2022. Working time arrangements are also relatively inflexible – daily start and finish times are fixed for more than two thirds of surveyed employees in Slovakia, the fourth highest share in the EU (EC, 2020). The use of voluntary part-time work or flexible work schedules for women with young children should be promoted. In Sweden, for instance, mothers can split the parental leave period of 18 months in a number of shorter spells and use them to shorten working hours until their children reach the age of eight.

Improving the labour market integration of Roma women requires more holistic policy approaches as discussed in detail in previous Surveys (OECD, 2019[35]). The employment rate of Roma women is less than half of that of non-Roma women, and most Roma live at risk of poverty and social exclusion. Tackling the labour market challenges of Roma women requires approaches that cut through several policy areas. This includes addressing language barriers, expanding pre-school facilities, improving skills by enhancing the inclusiveness of the education system (e.g. by increasing the number of Roma-speaking teaching assistants and reducing the number of Roma in special needs schools), and strengthening second-chance education programmes. Moreover, better access to health care services, accelerating the formalisation of

property rights in Roma settlements to enhance access to basic infrastructures (*see Chapter 2*) as well as adequate transport infrastructure to connect Roma settlements to job markets is needed to foster integration.

Figure 1.15. Parental leave is much longer than in other OECD countries

Number of weeks, 2022



Source: OECD Family database.

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Table 1.7. Past key recommendations on pensions and mother's labour force participation

Recommendations in previous Surveys	Actions taken since 2021
Link the future statutory retirement age and the minimum number of years of contributions required for retirement to life expectancy	In 2022, the statutory retirement age was re-linked to life expectancy and early retirement after 40- years of contributions was introduced.
Phase out the early retirement option for mothers	No action taken.
Reconsider the planned introduction of the parental bonus	The parental bonus was introduced in 2022.
Reduce the maximum duration of parental leave and make part of it conditional on the father's participation.	No action taken.
Expand the supply of high-quality childcare facilities, especially in underserved regions.	The Recovery and Resilience plan foresees EUR 142 million investment in pre-school facilities by mid-2026.

Maximising the impact of public investment

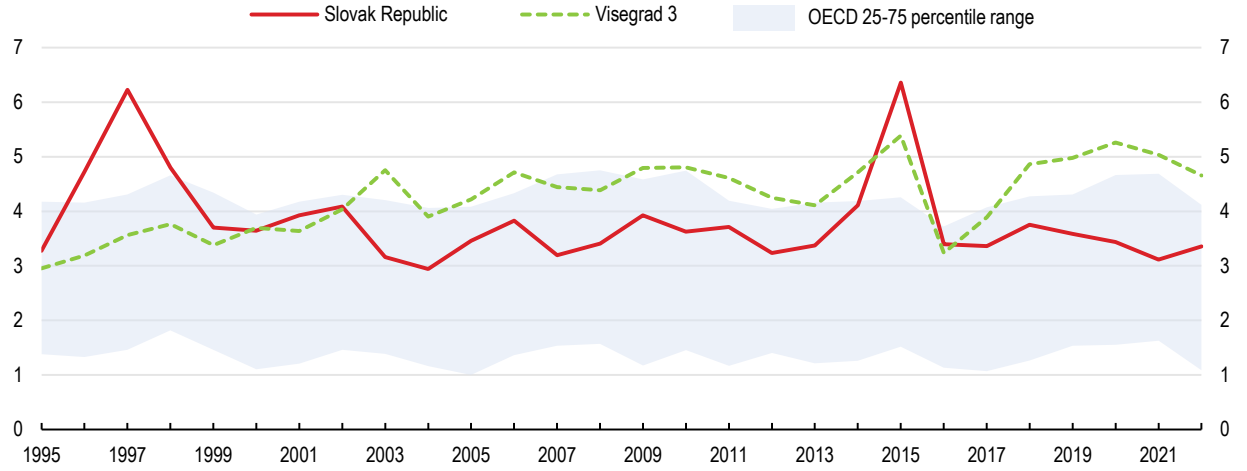
Public investment lags that of regional peers. Slovakia spent around 3.5% of GDP on public investment over the past two decades, above the EU average but less than regional peers (Figure 1.16). Slovakia appears to be underinvesting in particular in the areas of education, health, and research and development. Estimates of the public capital stock suggest a significant gap to other EU countries and regional peers in these areas while the transport capital stock is now comparable to other EU countries (MoF, forthcoming). Given significant gaps of Slovakia's educational and health outcomes and innovation capacity compared to other OECD countries as pointed out in previous *Surveys* (e.g. (OECD, 2022[19])) more investment in these areas seems warranted.

Moreover, the efficiency of public investment spending needs to be improved. About 53% of companies consider the infrastructure in Slovakia to be inadequate, compared to 38% in the EU on average. (Eurobarometer, 2022[39]). Estimates in (Dutu and Sicari, 2016[40]) suggest that spending efficiency in the areas of education, health and public administration is among the lowest in the OECD. More recent data envelope analysis (DEA) relating inputs (public investment) in Slovakia to outputs such as the road network length, connections to wastewater treatment, number of hospital beds, and energy production capacity also suggests significant room to increase investment spending efficiency (MoF, forthcoming).

Furthermore, benefits of investment projects evaluated by the Ministry of Finance only slightly exceeded their costs, with a benefit-cost ratio (BCR) averaging 1.5. Only around 30% of investment projects reach a BCR of 2, which is considered a minimum standard for most types of public investment projects in the United Kingdom.

Figure 1.16. Public investment is lower than in peer countries

Government gross fixed capital formation as % of GDP



Note: Visegrad 3 refers to the average of the data for the Czech Republic, Hungary and Poland.
Source: OECD National Accounts database; and OECD calculations.

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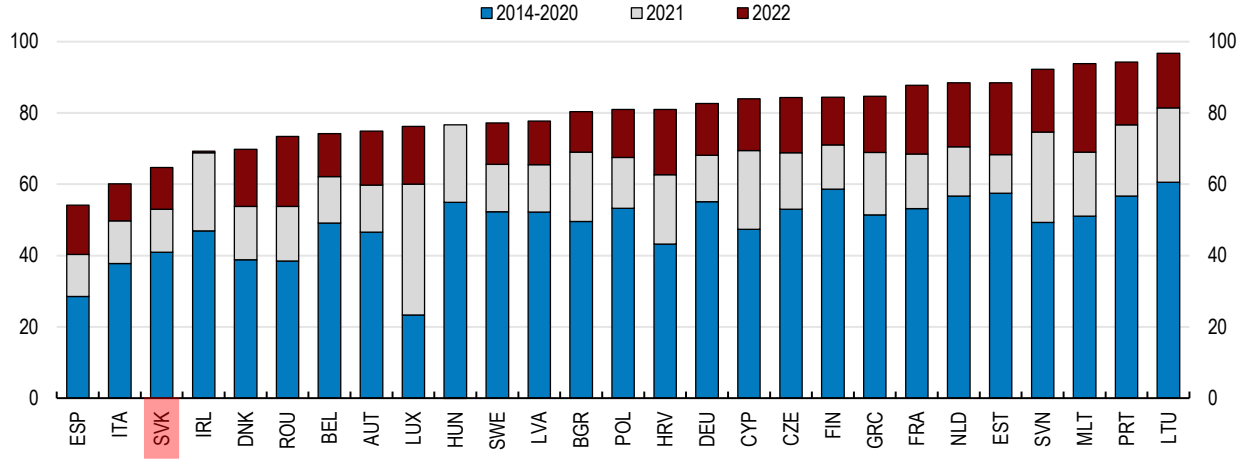
Improving the absorption of EU funds can help boost investment spending in lagging areas. Significant inflows of EU structural and cohesion funds have been an important driver of public investment. Over the period 2024-2027, Slovakia is eligible for EU funds worth over 14% of 2023 GDP, including structural funds from 2021-2027 programming period and the Recovery and Resilience facility. However, the drawing of EU funds has historically been slow. For example, by the end of 2022 only about 65% of the allocated EU structural funds from the 2014-2020 programming period were spent, one of the lowest shares in the EU (Figure 1.17). In the past, the absorption rate jumped to close to 100% of the allocations in the last possible year of drawings. However, this raises concerns over the efficiency of spending. For example, large investment spending in a single year may push up construction prices and reduce competition in tenders (OECD, 2016[41]). Moreover, because of a lack of significantly prepared projects, about EUR 1 billion EU structural funds from the 2014-2020 programming period were re-allocated to finance measures to mitigate the energy crisis in 2023. Difficulties in implementing capital expenditures are not confined to EU funded projects but extend to nationally-funded projects (MoF, 2023[42]).

Significant progress has been made to improve project planning, preparation, and prioritisation. Since 2016, all investment projects above EUR 40 million (EUR 10 millions for IT projects) require a feasibility study that the Ministry of Finance centrally evaluates. A general cost-benefit methodology and sectoral methodologies were adopted to provide better guidance for investors in preparing feasibility studies. In 2020, an investment authority (IA) was established within the Ministry of Finance to streamline project preparation and improve the quality of investments. The mandate of the IA was extended to assess all public investment projects above EUR 1 million. Projects above EUR 1 million but below EUR 40 million are assessed only once before public procurement. Large projects (above 40 mil. EUR and 10 mil. EUR in IT sector) are assessed three times - at the stage of feasibility study, before public procurement and before the agreement with the contractor is signed. Since 2021, all ministries with annual public investment expenditures above EUR 20 million have to publish investment prioritisation methodologies and investment plans for at least 5 years based on a standardised methodology. In addition, only well-prepared investment projects with a positive social return that conform to the prioritised investment plan should be included in

the budget (zero-based budgeting) from 2021. Prioritising well-prepared projects with higher benefit-cost ratios should help implement investment spending and improve spending efficiency.

Figure 1.17. The absorption of EU structural funds is slow

Absorption of the 2014-20 programme of EU structural funds, %



Note: EU structural funds include here the Cohesion Fund, European Regional Development Fund, European Social Fund and Youth Employment Initiative. Absorption rate is the percentage of funds spent relative to the total planned amount (EU funding and national co-financing).

Source: Open Data Platform for the European Structural and Investment Funds.

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The central appraisal of investment projects at an early stage of project preparation should be expanded. In 2022, 246 projects with a total cost of EUR 10.3 billion were centrally evaluated by the Ministry of Finance and savings of EUR 657 million identified (median saving of 6% per project) (MoF, 2023[42]). The largest savings potential is generally identified at an early stage of project preparation, when feasibility studies are centrally appraised. In contrast, central appraisal only at a late stage of project preparation before procurement, only leads to small savings (MoF, 2023[42]). This is because cost-saving changes to the technical specifications at a late stage of project preparation are more difficult to implement. The authorities should therefore consider lowering the threshold for projects that are centrally appraised at an early stage (generally projects above EUR 40 million). In contrast, the threshold for projects appraised only once at a late stage of project preparation (projects with costs of EUR 1 to 40 million) could be increased. This would free limited resources for early-stage appraisals with larger savings potential. A recent legislative change went in the opposite direction. In 2023, parliament approved a law that would no longer require a central evaluation of the feasibility study for highway projects. This significantly reduces the potential for the Ministry of Finance to identify savings by proposing different technical solutions. The savings potential from early-stage evaluations of transport projects is large. For example, the average suggested savings of the 24 transport projects assessed by the Ministry of Finance was around a quarter of the initial project cost. Skipping the early-stage assessment only yields marginal time savings, as the Ministry of Finance by law only has 30 days to assess investment projects. Large transport investment projects should therefore continue to be evaluated at an early stage to ensure high benefit-cost ratios.

Further progress can be made to improve project preparation, planning and implementation. Investment plans and priority methodologies are only prepared at the central government level but not at the regional level, which accounts for around 30% of public investment (OECD, 2021[43]). Furthermore, the establishment of a specialised unit to strengthen financial oversight of major SOEs, including their annual budgets and investment plans, could help improve public investment efficiency as SOEs carry out half of public investment in Slovakia (IMF, 2019[44]). Moreover, published investment methodologies and plans by line ministries currently have different formats and some of them do not meet quality criteria, for example

in terms of identifying the most important projects or insufficiently covering all relevant types of capital expenditures (MOF, 2023[13]). This points to the need to assess staff needs and further strengthen human capacity at line ministries and lower levels of government via targeted training. Further improvements are also necessary in later stages of the investment cycle. The implementation of projects is often delayed because of poor project management and a system for monitoring the progress of projects does not exist. Ex-post assessments of investment projects are not done systematically, and their results are not used to improve current processes.

In October 2023, the previous caretaker government approved a strategic document (*A guide for a successful Slovakia*) that includes recommendations to better use European funds. The document recommends for example to prepare a long-term development strategy until 2050, including strategic investment priorities, and a national fund to support high-quality project preparation. Moreover, a binding schedule for the announcement of tender calls would increase the transparency for project applicants. The document also calls for further digitalisation of processes and improving the quality of the preparation phase of public procurement via capacity building and sufficient time to implement procurement.

Improving public procurement procedures

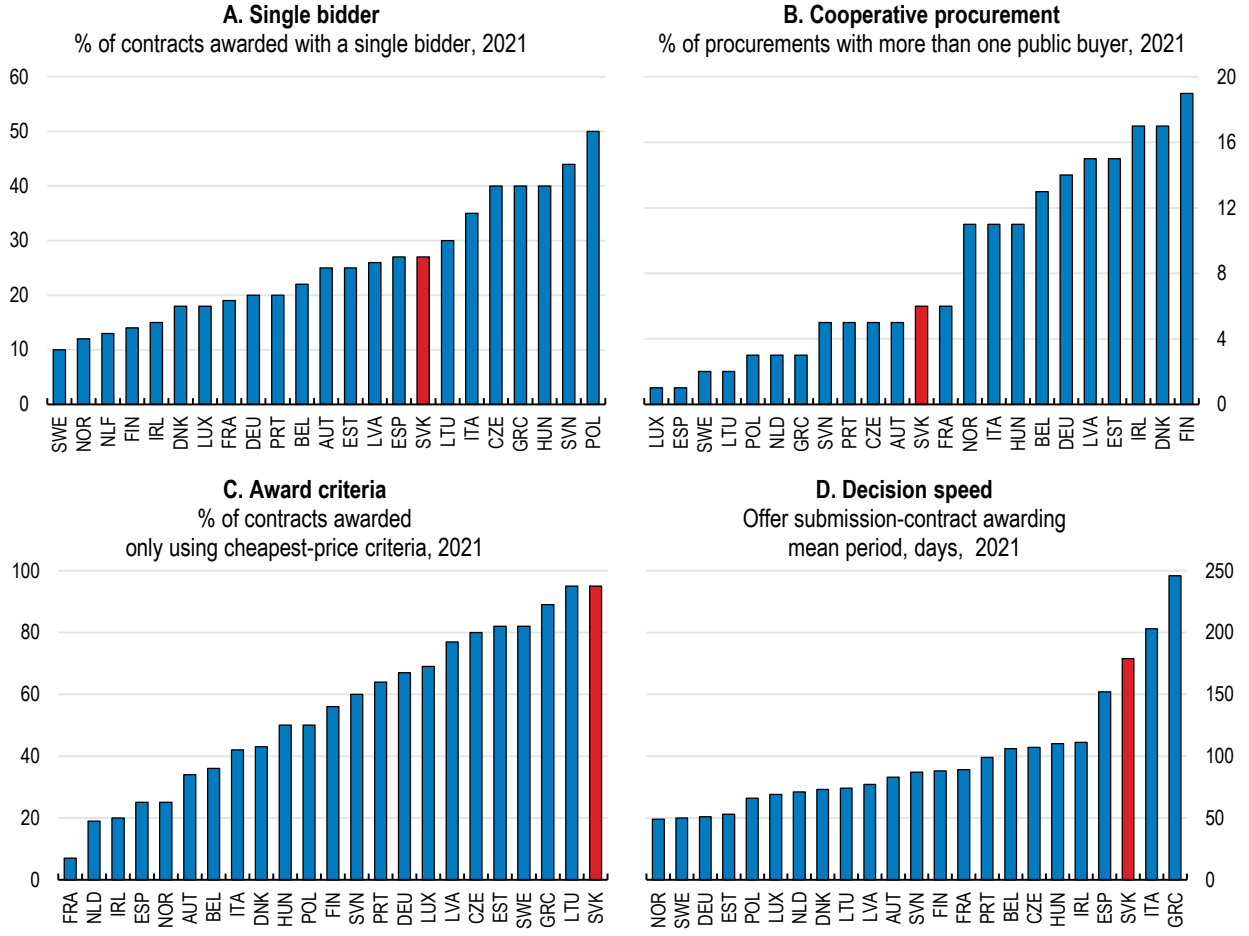
Public procurement plays an important role in the efficient provision of public services. Public procurement accounted for 12 % of GDP and 27% of general government expenditures in Slovakia in 2021 (OECD, 2023[45]). The public procurement act was amended in 2021 to speed up and simplify procurement processes, align domestic regulations with EU directives, and improve procurement controls by automating contract evaluation and award. A greater use of e-procurement and efficient collection and analysis of data is also foreseen. Nevertheless, the European Commission's Single Market Scoreboard suggests deficiencies in particular in the areas of competition, efficiency and quality of public procurement (Figure 1.18). For example, about 95% of contracts in Slovakia were awarded based only on the lowest price in 2021. This is well above the EU average of 64% and might reflect limited competition based on quality.

Using a wider set of award criteria in public procurement can enhance value for money. Under EU regulations, contracting authorities can award a public contract based on the lowest price or the most economically advantageous tender (MEAT) criterion, which means applying criteria in addition to or other than the price. These criteria can relate to the quality of the product or service, innovative or green solutions or life-cycle costs. The use of MEAT criteria in public procurement procedures is relatively limited in Slovakia, accounting for only 14% of the total procurement volume on average during the period 2016-20 (OECD, 2023[46]). A lack of guidelines and tools, an unclear legal framework and the perception that MEAT criteria are riskier are among the main challenges (OECD, 2021[47]). To alleviate these bottlenecks, the OECD is working with the Slovak Public Procurement Office to develop guidelines and templates related to (i) using MEAT criteria, (ii) market consultations to define MEAT criteria, and (iii) combining the use of MEAT criteria with broader policy objectives (OECD, 2023[46]). In addition, targeted capacity building activities should be developed including a training action plan on the use of MEAT (OECD, 2021[47]).

Encouraging more joint public procurement can increase efficiency and speed up the digitalisation of the public sector. Procurement combining several public buyers is relatively rare (Figure 1.18, Panel B). The centralisation or joint procurement of products and services can strengthen public sector negotiating power, exploit synergies and enable savings. The benefits are potentially large in the area of ICT, given that Slovakia lags behind in the digitalisation of the public sector. Joint and central procurement can promote the adoption of interoperable IT solutions across the central and local level. While a high share of ICT is purchased at the central level, there does not currently exist an ICT specific Centralised Purchasing Body (CPB) (OECD, 2022[48]). Germany created the Central Office for IT Procurement within the Federal Procurement Office of the Federal Ministry of the Interior (Zentralstelle für IT Beschaffung) in 2017. In addition, very little joint ICT procurement takes place. National, regional and local public administrations can reduce costs, increase efficiency and foster interoperability by jointly developing, reusing or sharing IT

solutions that meet common requirements (OECD, 2022[48]). The planned new central platform for IT procurement, as part of the Recovery and Resilience plan, is a step in the right direction.

Figure 1.18. Public procurement procedures can be enhanced



Source: European Commission Single Market Scoreboard, https://single-market-scoreboard.ec.europa.eu/business-framework-conditions/public-procurement_en.

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Table 1.8. Past key recommendations on public investment and procurement

Recommendations in previous Surveys	Actions taken since 2021
Streamline public procurement verification and control procedures.	In October 2021, an amendment to the law was approved to make public procurement faster, simpler and more transparent, for example through simplified procedure for below-threshold contracts, centralised strategic purchases, greater digitalisation
Further strengthen cost-benefit analysis and oversight of public investment over the project life-cycle.	Since 2021, line ministries have to publish an investment plan and prioritization methodology. In 2022, a methodology for the preparation and assessment of investment projects was introduces.

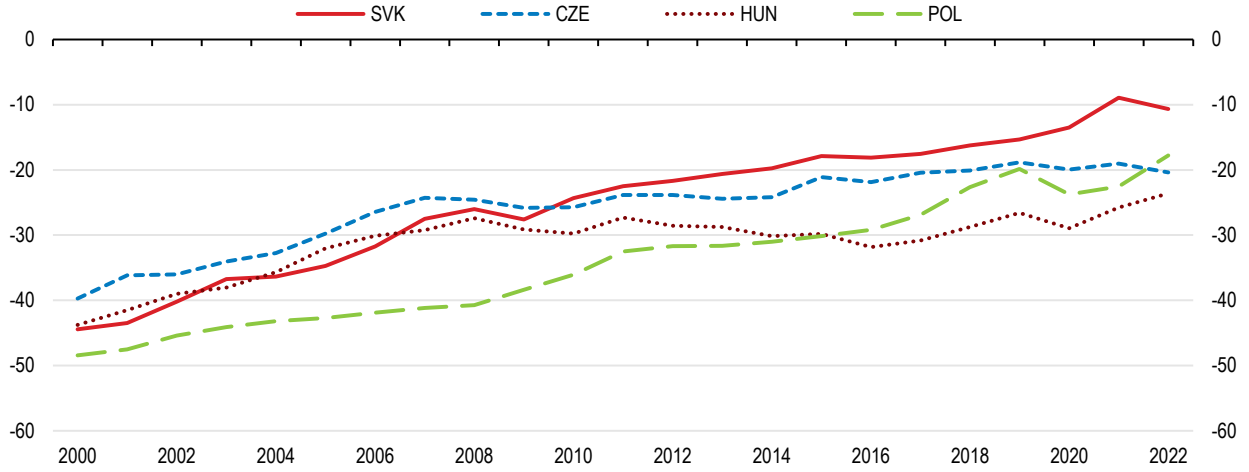
Sustaining productivity growth

Productivity growth has slowed since the global financial crisis, but remains high by international standards. As a result, productivity convergence to the OECD average has continued, albeit at a slower pace (Figure 1.19). The slowdown partly reflects diminishing benefits from Slovakia's integration into global value chains and has been accompanied by a marked downturn in FDI inflows. Foreign direct investment

has focused mainly on downstream activities, which, have generated high productivity growth in the past but have low value added. Strong productivity growth has been mainly driven by the manufacturing sector, especially large multinational firms, while productivity gains in services have been more moderate (OECD, 2022[19]) (OECD, 2019[35]). The manufacturing sector, which also employs a much larger share of the workforce in Slovakia (22%) than in other OECD countries (13%), is highly exposed to global shocks and global trends such as automation and the green transition. To sustain productivity growth, Slovakia needs to strengthen its adaptability to these trends, broaden the drivers of growth and develop its capacity to innovate and adopt new technologies.

Figure 1.19. Productivity convergence has been strong

Productivity gap to the OECD average, %



Note: Productivity is calculated as GDP (USD, constant prices, 2015 PPPs) per hour worked.
Source: OECD Productivity database; and OECD calculations.

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Improving the adaptability of education and skills provision

Technological progress as well as the green and digital transitions will shift the demand for skills, highlighting the need for an adaptable education system that provides opportunities to re- and upskill workers throughout their career. Around 35% of jobs in Slovakia face a high risk of automation, one of the highest shares in the OECD (Lassébie and Quintini, 2022[1]). Reskilling needs depend on the type of automation (e.g. robots, AI) and workers' skill level, with low-skilled jobs twice as exposed to robots than high-skilled occupations for example (OECD, 2022[19]). Furthermore, the decarbonisation of industry, phase out of coal or shift to electric vehicle production will imply adjustments to occupations and required skills (see below).

Sustaining productivity growth will require improving the quality of the education system, reducing skill shortages and better matching of skills to jobs. Among 25-34-year-olds, fewer Slovaks score high in problem-solving in technology-rich environments compared with other OECD countries on average according to the Survey of Adult Skills (PIAAC) data, and shortages exist for example in advanced digital skills (OECD, 2022[49]). Moreover, assessments of the skill set of the labour force and labour market needs in Slovakia suggest high skill mismatches (EC, 2022[50]). Field-of-study mismatch, meaning that workers educated in a particular field work in a different field, is high and a large share of tertiary educated workers are overqualified compared to other OECD countries (OECD, 2021[51]). Skill mismatches are also high among employed Ukrainian refugees. Although one in three refugees working in the country is tertiary educated, only 4% work in an occupation requiring this level of qualification (Hábel and Veselková, 2022[52]). Skill imbalances come at a cost: they reduce the productivity and salaries of Slovak workers by

an estimated 6%, a high level by international standards (Giorno, 2019[53]). As part of the Recovery and Resilience plan, progress has been made to attract foreign high-skilled workers, by introducing a new type of visa for high-skilled workers from third countries and simplifying the recognition of foreign qualifications. One-stop shops to help foreigners and returning Slovaks to settle in Slovakia are planned.

Strengthening data collection, analysis and dissemination on labour market skill needs can help align student choices with labour market needs. Several skills assessment and anticipation tools exist, and a graduate tracking system for secondary and tertiary graduates has been established in 2018. The tracking system provides relevant information such as on employment status of all graduates and wages for tertiary graduates. However, wage information for graduates of vocational programmes is currently missing. The capacity to analyse the data and identify data gaps (e.g. on skill use, tasks, job satisfaction of graduates) could also be strengthened and access to data for researchers and experts in key ministries facilitated (Cedefop, 2020[54]). A one-stop-shop portal that allows students and their families to access information on labour market and skill needs as well as study opportunities, as in Denmark and Poland, could be established.

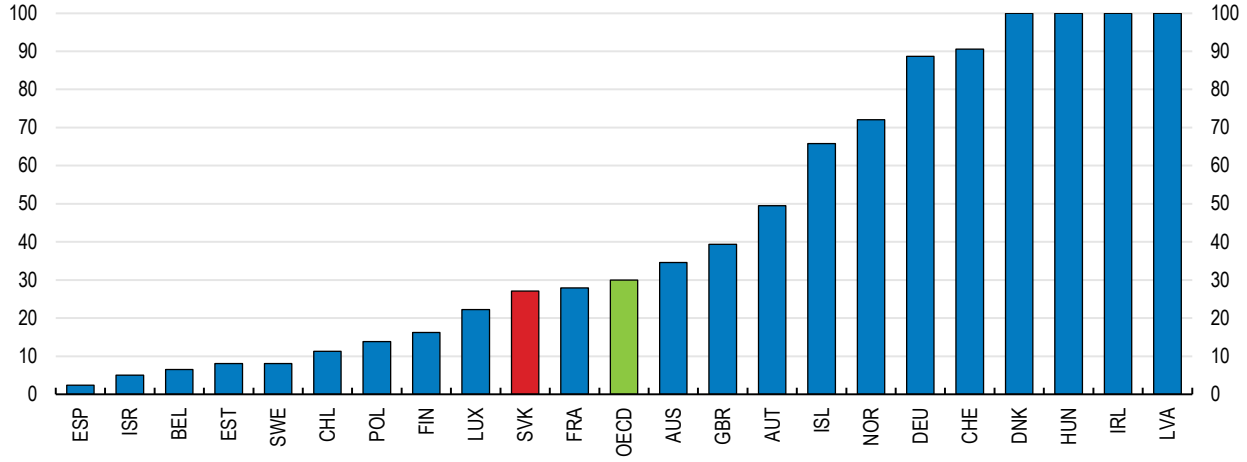
Work-based vocational education can be further enhanced to provide students with labour market relevant skills. The authorities have introduced a number of welcome reforms to make the vocational training system more responsive to labour market needs. In 2015, the government introduced a dual VET model to increase opportunities for work-based learning. However, uptake of the dual model and more broadly of work-based learning remains low (Figure 1.20). In 2021, the amendment to the Vocational Education and Training Act introduced supra-company training centres, which are companies offering practical training to students who signed an apprenticeship contract with a different company in the same sector (often SME), to provide more practical training opportunities and facilitate the participation of SMEs in the dual VET model. The uptake, especially among SMEs, should be monitored. Alternatively, Slovakia could introduce training associations. Evidence from Austria and Switzerland suggests that such training associations can improve the quality of training and foster participation of firms in work-based learning, as costs are shared between firms (OECD, 2020[37]).

The quality of tertiary education needs to be improved to foster skills, and retain and attract the most skilled students and teachers. Tertiary attainment levels have increased strongly, especially among women, over the last two decades. While tertiary attainment rates of women are now close to the OECD average, they continue to lag behind for men. Slovak higher education institutions are poorly ranked in international comparison and the research quality is low. The low perceived quality of Slovak higher education institutions is reflected in the very high share of high-school graduates that study abroad (Figure 1.21). The students who leave are the most successful students according to examination results and few of them intend to return home after their studies (Martinák and Varsik, 2020[55]). This implies that Slovakia is losing some of its most-skilled workers, aggravating skill shortages.

To address these issues the authorities have embarked on a number of reforms. For example, an independent accreditation agency for higher education was established in 2018 to ensure quality standards in line with European standards. In 2022, a periodic scientific evaluation system was introduced to identify excellence clusters at higher education institutions and evaluations are ongoing. The internal governance of universities has been reformed to strengthen the competencies of rectors and the board of trustees. Finally, performance contracts are to be signed with most higher education institutions by the end of 2023. The performance contracts condition funding on meeting performance and quality criteria to support specialisation of higher education institutions. However, planned mergers of higher education institutions have been delayed.

Figure 1.20. Few students are enrolled in work-based learning programmes

Share of VET students enrolled in combined school- and work-based programmes, 2021

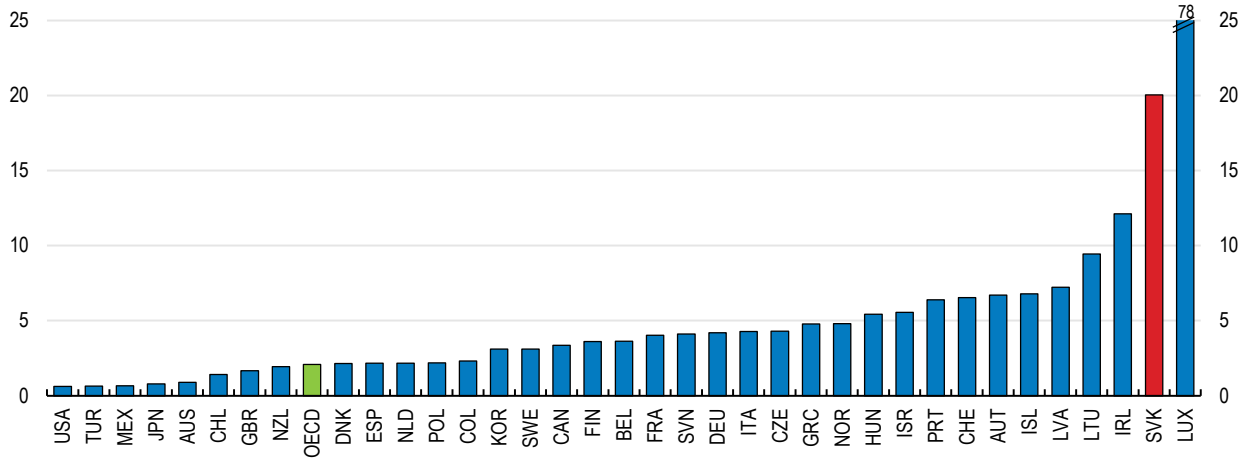


Note: VET students in upper-secondary education.
Source: OECD Education Statistics database.

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Figure 1.21. The share of tertiary students enrolled abroad is very high

Share of national tertiary students enrolled abroad, %, 2021



Source: OECD (2023), Education at a Glance 2023: OECD Indicators, OECD Publishing, Paris, https://doi.org/10.1787/e13bef63-en.

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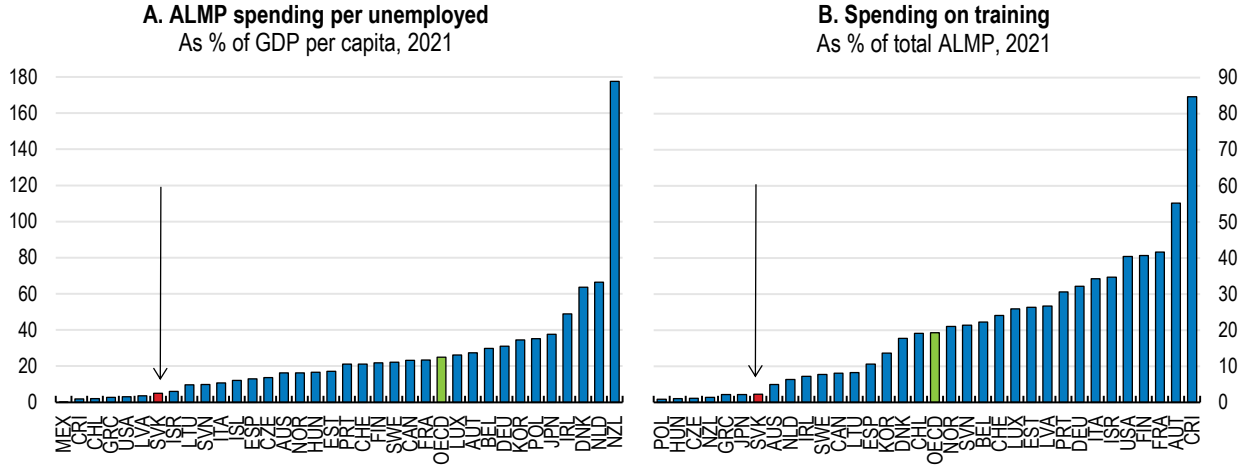
Financial incentives to stimulate teaching and research excellence could be further strengthened. Public expenditure per tertiary student has increased but remains lower than in other OECD countries. An increase in the overall budgetary envelope for tertiary expenditure could be conditioned on the successful implementation of ongoing reforms. Funding allocations to higher education institutions are mainly based on a funding formula, which has recently been adjusted to give greater weight to research quality and graduate placements. The funding formula could be further refined to take into account the quality of employment via graduate earnings for example. Moreover, targeted funding, often used in other OECD countries to achieve policy objectives in higher education, is limited in Slovakia (OECD, 2021[51]). The new performance contracts provide an opportunity to strengthen targeted funding to enhance teaching and research quality. For example, targeted funding could be used to promote professionally oriented programmes such as professional bachelor's degrees and short cycle tertiary programmes, which are

underdeveloped in Slovakia. Moreover, funds could be used to strengthen collaboration of higher education institutions, for example through centres of research and excellence initiatives to pool resources as in France. Furthermore, targeted funds could be used to enhance salaries of high performing academic and non-academic staff. Finally, targeted funding could be used to attract academics from abroad (OECD, 2021[51]).

Incentives to participate in life-long learning need to be strengthened to address skill shortages and mismatches. Few Slovak adults participate in training although the share has increased more recently. The government adopted a Lifelong Learning and Counselling Strategy in 2021 and an Action for the years 2022-24, taking into account recommendations of the *OECD Skills Strategy* (OECD, 2020[37]). The Action Plan includes measures to map and strengthen basic skills for low-skilled adults, including digital skills, an evaluation of the national qualification's framework, and the introduction of micro-credentials to enhance the flexibility of acquiring qualifications. The plan to change the Alliance of Sectoral Councils, which include social partners and representative from ministries, from an advisory body of the Ministry of Labour to an independent legal entity and strengthen its role in the design of education and re-training strategies is welcome. Individual learning accounts will also be piloted. It is important that the individual learning accounts are accompanied by a strong system to guide participants to acquire labour-market relevant qualification, such as digital or green skills, and robust quality control of the training providers. Greater support should be given to groups most in need such as low-skilled groups. Besides financial support to participate in training, consideration should also be given to help overcome time constraints, which are one of the barriers to employees wishing to engage in training. For example, France has been using such accounts, enabling employees to use training hours to acquire recognised qualifications or basic skills.

Training of adults out of work should be increased. The share of unemployed adults participating in formal and non-formal job-related learning is particularly low in Slovakia (OECD, 2020[37]). Active labour market policies can provide the jobless with opportunities to re- and upskill. However, spending on active labour market policies is low (Figure 1.22), relies heavily on EU funding and therefore lacks sustainable funding from the national budget, and is not sufficiently allocated to training. A new allowance that covers the costs of training for jobseekers was introduced in 2023. This is welcome but should be accompanied by strengthening the counselling and guidance capacity of the public employment service and effective profiling of jobseekers to identify their needs and the most relevant training paths. Moreover, the network of labour offices needs to be expanded in underserved regions or municipalities to expand access to training opportunities for hard-to-reach unemployed adults (OECD, 2020[37]).

Figure 1.22. Activation policies and training should be expanded



Note: ALMP refers to active labour market programmes.
Source: OECD Labour Market Programmes database.

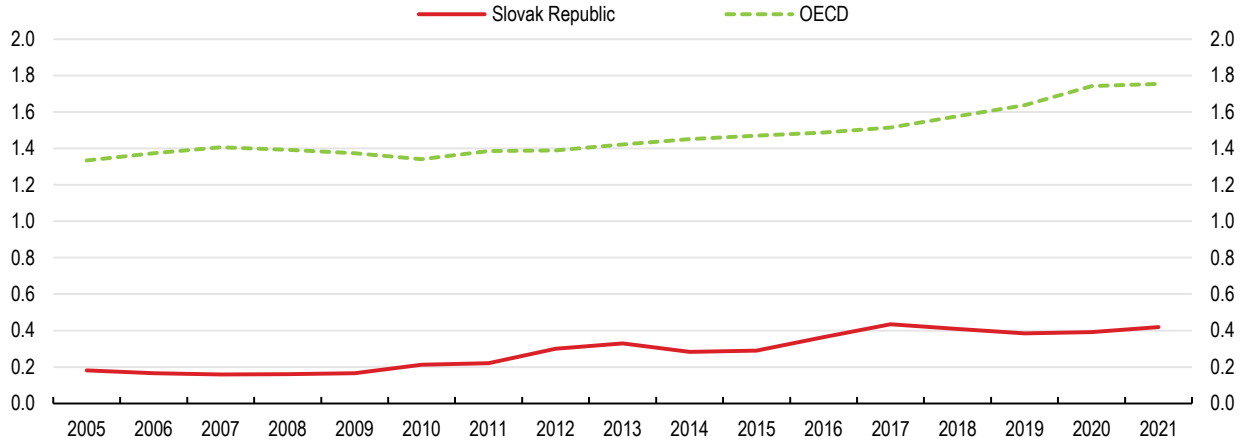
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Fostering the innovation capacity and digital adoption

Slovakia's research and innovation intensity continues to lag markedly behind other OECD countries. Patent applications, the share of innovative firms and expenditure on research and development (R&D), especially business R&D, are internationally low (Figure 1.23). The new National Strategy for Research, Development and Innovation targets an increase of public R&D expenditure from the national budget to 0.67% of GDP by 2030 and private R&D expenditure to reach 1.2% of GDP, which is welcome. Some progress has been made to reduce the fragmentation of the research governance system (OECD, 2022[19]) and to improve coordination among ministries and agencies by strengthening the role of the Government Council for Science, Technology and Innovation and by standardising evaluation processes. In addition, reforms to the Slovak Academy of Sciences aim to facilitate public-private research cooperation.

Figure 1.23. Business R&D expenditure is low

Expenditure on R&D in the business sector, as % of GDP



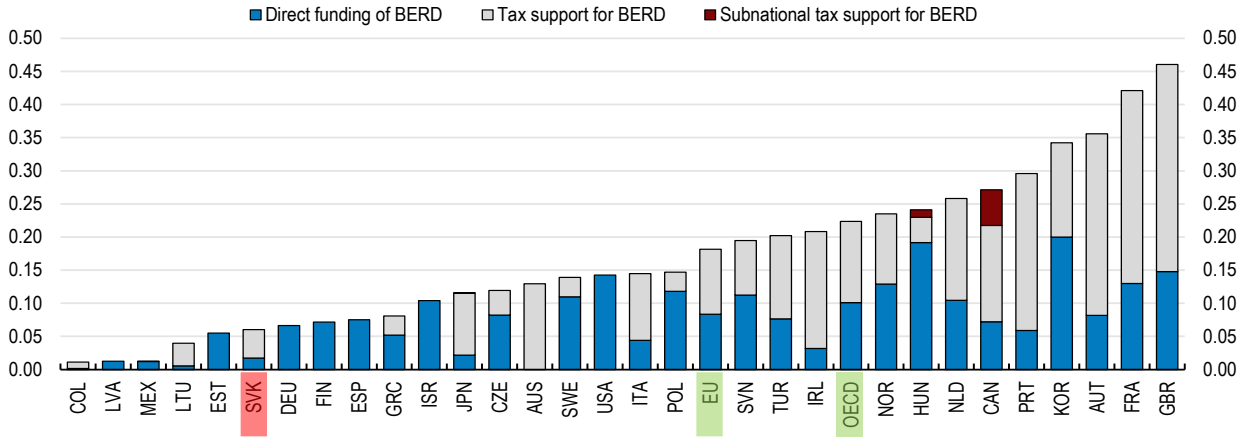
Source: OECD Main Science and Technology Indicators database.

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Financial market imperfections can hinder investment in intangible assets (R&D, databases, software) especially for small and young firms. The main reason is that intangible capital is more difficult to use as collateral than physical capital. Government support to R&D can help overcome these market failures and spur firms' investment in intangible capital as well as boost digital adoption (Berlingieri et al., 2020[56]). However, government support for business R&D investment is low in Slovakia and largely based on R&D tax incentives (Figure 1.24).

Figure 1.24. Government support for business R&D is low

Direct government funding and government tax support for business R&D, as percentage of GDP, 2020



Note: BERD refers to business enterprise R&D expenditure.
Source: OECD R&D Tax Incentive Indicators database.

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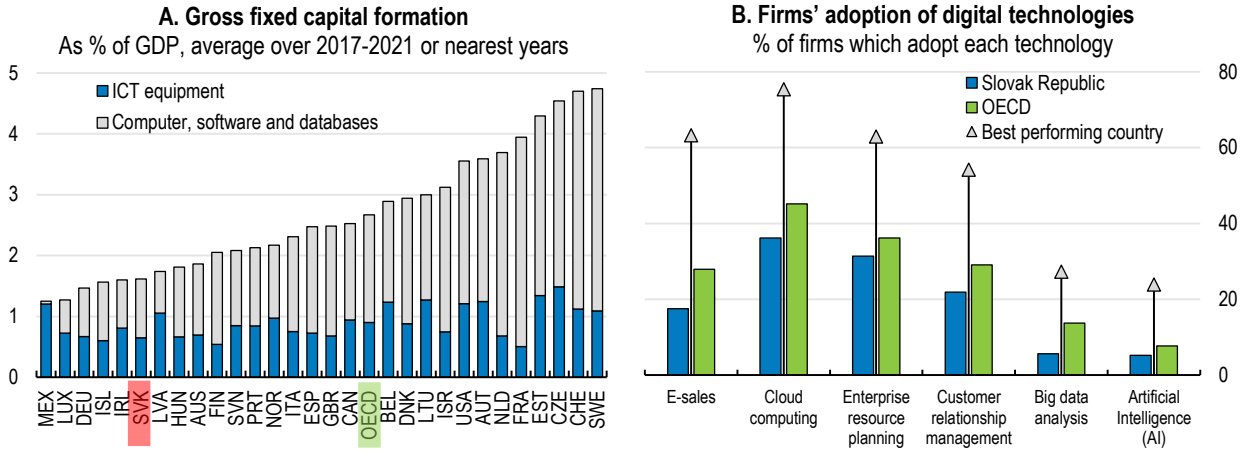
Government support for business R&D spending should be increased and its effectiveness enhanced. Recent evaluations of the R&D tax allowance suggest that it mainly benefits large, incumbent and multinational firms (MoF, 2023[15]). To make R&D tax benefits more beneficial for small and young firms, it is important that they include carry-forward provisions or cash refunds. The R&D tax allowance in Slovakia can be carried forward up to five years. This is welcome, but cash refunds may be more beneficial for young firms, who may not have sufficient tax liability for several years and need financial support early in the innovation process. Australia, Canada, Colombia and the United States are examples of countries that offer refundable R&D tax credits targeted at SMEs and start-ups (OECD, 2023[57]). Since 2018, Slovakia also operates a patent box, which reduces taxes on patent income. Evaluations of the scheme suggest that only about 10 firms benefited from the scheme in 2021 (MoF, 2023[15]). Moreover, IP boxes and similar income-based provisions mainly benefit large MNEs, as they hold most of the intellectual property (Appelt et al., 2016[58]). Expenditure-based R&D support measures are generally preferable, as they are independent of the success of the investment, directly support the financing of R&D and help overcome difficulties in obtaining external funds especially for small and young firms. The authorities should therefore consider cancelling the patent box. Instead, the authorities could give greater priority to direct R&D support schemes, such as competitive grants. OECD research (OECD, 2020[59]) highlights the complementarity between tax incentives and direct funding for innovation support. R&D tax incentives tend to encourage experimental development more strongly, while direct funding tends to encourage basic and applied research. Slovakia operates several competitive grant schemes that have generally been found to be effective support tools (MoF, 2023[15]) and that could be scaled up.

Firms lag in the adoption of many digital tools and technologies. ICT investment is much lower than in other OECD countries and firms lag in the adoption of advanced digital tools, such as cloud computing, artificial intelligence or big data by companies (Figure 1.25). The digital intensity of SMEs is particularly low (EC, 2023[27]). The authorities have taken a number of steps to improve the digitalisation of the economy. Slovakia's Recovery and Resilience Plan allocates around 20% of total grants to the digital transformation. As part of these measures, Slovakia rolled out a new scheme to support research and application of advanced digital technologies by companies, including SMEs, research institutions and other entities. Moreover, a network of five European Digital Innovation Hubs (EDIH) have been established, which will provide companies with services to support the introduction of new technologies and innovations. The authorities also adopted strategies and action plans including the *Digital Transformation Strategy of Slovakia 2030* in 2019, the *Strategy and Action Plan to Improve Slovakia's Position in the DESI Index by*

2025 in 2021, a *Digital Skills Strategy and Action Plan* in 2022, the *Action Plan for Digital Transformation of Slovakia 2023-2026* in 2022.

The digital infrastructure has improved but further progress is needed. The coverage of fixed very high-capacity networks (VHCN) has increased strongly and is close to the EU average, and Fibre connections (FTTP) are above the EU average (EC, 2022[60]). 5G coverage has also expanded quickly but remains below the EU average. Despite relatively low prices and increasing availability, take-up of high-speed broadband by households and firms is significantly lagging behind European peers (Figure 1.26). Moreover, coverage in rural areas remains at a much lower level (EC, 2022[60]). The *National Broadband Plan* aims to provide ultra-fast internet access (speeds of at least 100Mbit/s, expandable to 1Gbit/s) to all households by 2030. To encourage deployment of ultra-fast networks in underserved areas, the authorities could consider a competitive tender process for subsidies that operators can receive as in Israel for example.

Figure 1.25. ICT investment and adoption of digital technologies by firms is low



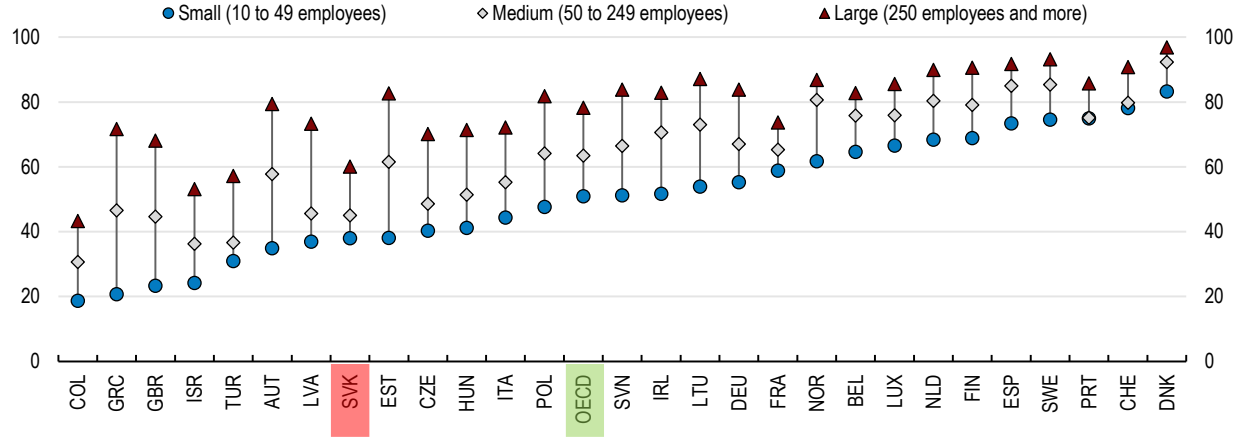
Note: In Panel B, the OECD aggregate is an unweighted average across all OECD countries for which data are available, taking the latest available year (ranging from 2014 to 2022, depending on the country and on the technology). For the Slovak Republic, data refer to 2021, with the exception of Big data analysis (2019).

Source: OECD National Accounts database; OECD ICT Access and Usage by Businesses database; and OECD calculations.

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Figure 1.26. Firms lag in the use of high-speed internet

Share or firms with broadband download speed at least 100 Mbit/s, %, 2022 or latest available year



Source: OECD ICT Access and Usage by Businesses database.

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Improving the business environment

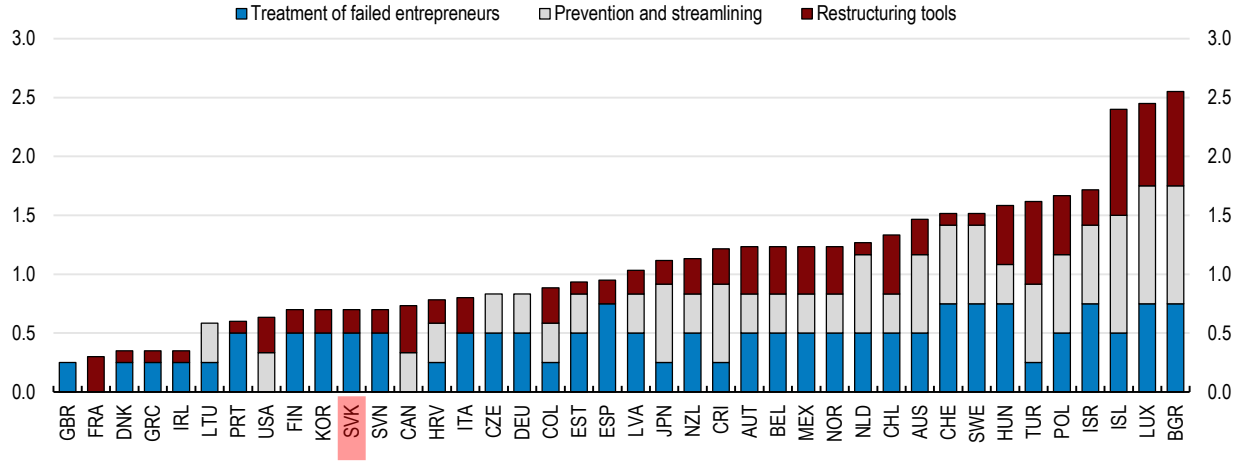
Enhancing the efficiency of the insolvency framework and the judicial system

Efficient insolvency frameworks can foster business dynamism, resource reallocation and productivity. Declared bankruptcies have increased over the period 2021-2023, likely due to the pandemic and energy price shock. Moreover, as a small open economy, Slovakia is particularly exposed to global shocks, and the green and digital transitions increase the need to facilitate economic renewal. According to the updated OECD insolvency framework indicator (André and Demmou, 2022[61]), Slovakia has made significant progress in improving its insolvency regime (Figure 1.27). In particular, Slovakia transposed the EU Directive on preventive restructuring frameworks in 2022, strengthened early warning mechanisms and streamlined insolvency processes via further digitalisation. Nevertheless, further progress can be made. For example, the number of stages in which the court is involved in the liquidation and restructuring process also remains higher than in other OECD countries, suggesting room to further promote out-of-court proceedings that can speed up and lower the costs of restructurings and liquidations (André and Demmou, 2022[61]).

Reforms to improve the efficiency of the judicial system are ongoing. Parliament approved the reform of the judicial map in 2022, a key reform of the Recovery and Resilience plan. Goals of the reform include the specialisation of judges and the reduction of the number of district courts from 54 to 36. New IT systems for court management and the business register are also being prepared. Challenges remain concerning the efficiency of processing administrative cases, with the lengths of processing such cases further deteriorating recently and relatively low clearance rates (EC, 2023[62]). Important reforms in this area are ongoing. The Supreme Administrative Court and a new system of administrative courts has become operational in 2021 and 2023, respectively (administrative cases of first instance were previously handled by administrative chambers within regional courts). Staffing of the administrative courts is almost complete but remains a challenge in Bratislava. Stronger promotion of the use of alternative dispute resolution methods outside the court system (e.g. mediation, conciliation, or arbitration) could further improve efficiency (Palumbo et al., 2013[63]).

Figure 1.27. The insolvency framework is relatively efficient

OECD insolvency indicator main sub-components, 2022



Note: The scores for the three main sub-categories are scaled from zero to one, with lower scores indicating more favourable frameworks.
Source: André, C. and L. Demmou (2022), "Enhancing insolvency frameworks to support economic renewal", OECD Economics Department Working Papers, No. 1738, OECD Publishing, Paris, https://doi.org/10.1787/8ef45b50-en.

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Strengthening the anti-corruption framework

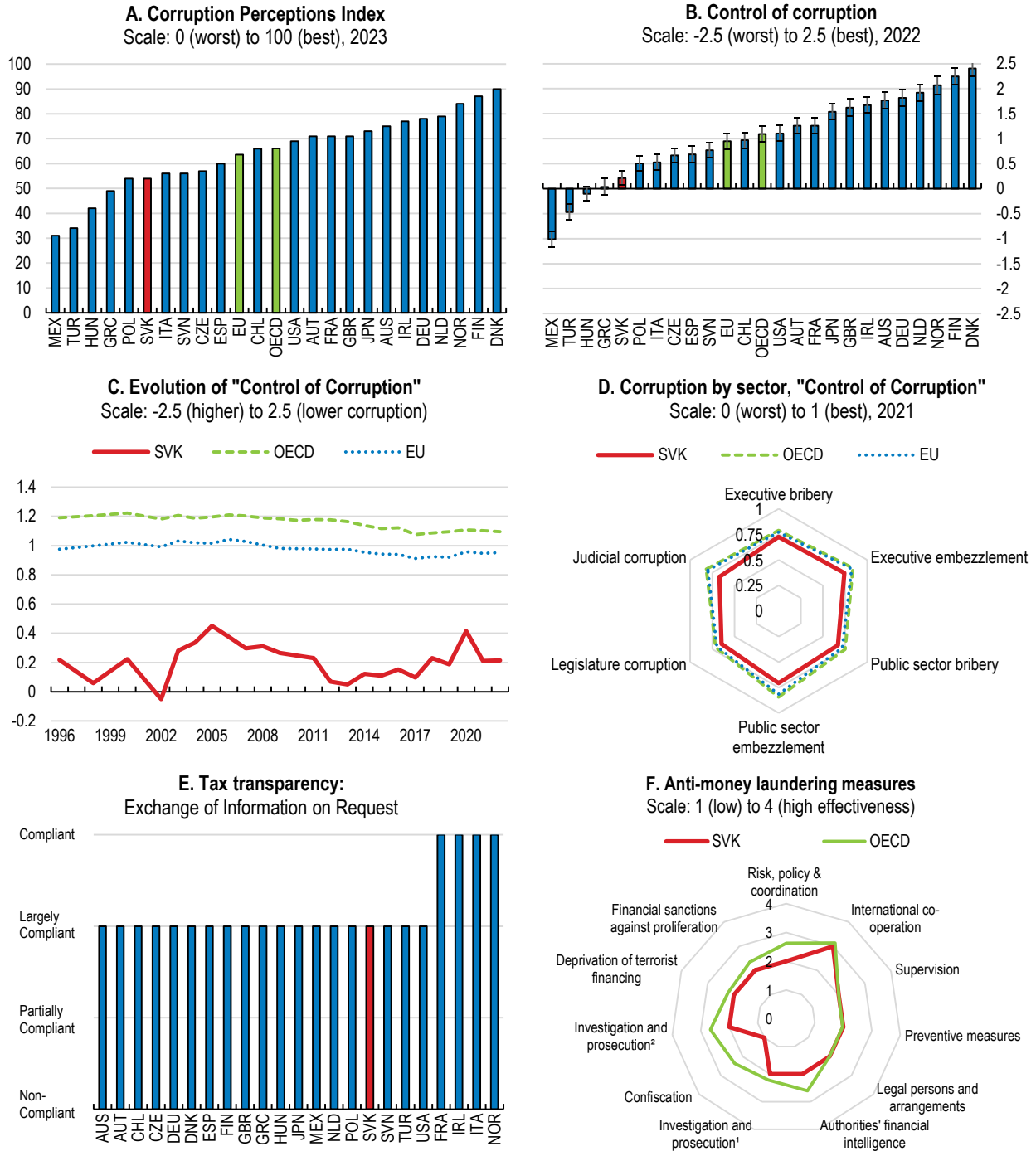
High levels of perceived corruption remain an important impediment to business in Slovakia (Figure 1.28). In 2022, 84% of businesses perceived corruption to be a widespread problem compared to 63% on average in the EU, and 50% of businesses considered corruption a problem when doing business (EU average 34%) (Eurobarometer, 2022[39]).

Progress in strengthening the anti-corruption framework continued but deficiencies remain. The new Whistleblower Protection Office became operational in 2021. An update of the 2019 National Anti-Corruption Programme is still pending. The draft programme contains measures based on GRECO evaluations (e.g. (GRECO, 2021[64])), including on the integrity and conflicts of interest of top executive positions in the central government (e.g. a code of ethics, establishment of an ethics commission, a public registry of gifts and meetings with third parties). The OECD (OECD, 2022[65]) identified a number of areas to improve the public integrity framework. These include: i) improving the identification of key corruption risk areas and strengthening the monitoring and evaluation framework of corruption risks; ii) expanding training and guidance on integrity standards for civil servants; and iii) strengthening standards on pre- and post-public employment. These recommendations are taken into consideration in the planned new Anti-Corruption Strategy for the years 2024-2028.

One important shortcoming of the anti-corruption framework is the lack of a specific framework for regulating lobbying. As a result, there are still no legal definitions of lobbyists, lobbying activities, nor effective sanctions for undue lobbying. The authorities should introduce regulations on lobbying and strengthen the legislation on conflicts of interest and asset declarations (EC, 2023[66]). Moreover, the use of the Prosecutor General's discretion to close several high-level corruption cases recently has raised concerns. It is important to improve coordination among the different law enforcement entities and to advance the legislative amendments to restrict the power of the Prosecutor-General to annul prosecutorial decisions (EC, 2023[66]).

Judicial independence is crucial to tackling corruption effectively and a strong rule of law. The level of perceived judicial independence in Slovakia continues to be low. The main reason is the perception of interference or pressure from the government and politicians, and from economic or other special interests. Following the 2020 constitutional amendments, the judicial council has taken up its new tasks, including the competence to review asset declarations of judges and the selection of the members (first judges) of the newly established Supreme Administrative Court. However, concerns remain over the regime under which members of the judicial council may be dismissed. The authorities should ensure that the members of the judicial council are subject to sufficient guarantees of independence as regards their dismissal (EC, 2023[66]). Moreover, the constitutional amendments also changed the provisions on immunity of judges and introduced a new criminal offence of 'abuse of law' to enhance the integrity regime for judges. The authorities should ensure that sufficient safeguards are in place and duly observed when subjecting judges to criminal liability for the crime of "abuse of law" as regards their judicial decisions (EC, 2023[66]).

Figure 1.28. Perceived corruption remains high



Note: Panel B shows the point estimate and the margin of error. Panel D shows sector-based subcomponents of the "Control of Corruption" indicator by the Varieties of Democracy Project. Panel E summarises the overall assessment on the exchange of information in practice from peer reviews by the Global Forum on Transparency and Exchange of Information for Tax Purposes. Peer reviews assess member jurisdictions' ability to ensure the transparency of their legal entities and arrangements and to co-operate with other tax administrations in accordance with the internationally agreed standard. The figure shows results from the ongoing second round when available, otherwise first round results are displayed. Panel F shows ratings from the FATF peer reviews of each member to assess levels of implementation of the FATF Recommendations. The ratings reflect the extent to which a country's measures are effective against 11 immediate outcomes. "Investigation and prosecution¹" refers to money laundering. "Investigation and prosecution²" refers to terrorist financing.

Source: Panel A: Transparency International; Panels B & C: World Bank, Worldwide Governance Indicators; Panel D: Varieties of Democracy Project, V-Dem Dataset v12; OECD Secretariat's own calculation based on the materials from the Global Forum on Transparency and Exchange of Information for Tax Purposes; and OECD, Financial Action Task Force (FATF).

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Table 1.9. Past OECD recommendations on education, innovation and business environment

Recommendations in previous Surveys	Actions taken since 2021
Strengthen initial and continuing teacher training with a focus on methods to identify and address learning weaknesses. Increase the number of teaching assistants speaking Roma and provide Slovak language support for Roma children.	The Recovery and Resilience plan includes measures to improve pupils' skills and make the education system more inclusive and equitable, i.e. by creating more places in pre-school establishments, updating school curricula, tackling segregation of the Roma population, providing specialised training for teachers and raising the professional prerequisites for employing teaching staff.
Evaluate financial incentives for firms to participate in the dual VET programme and support the establishment of employer-led training associations.	The amendment to the Vocational Education and Training Act of 2021 introduced the concept of supra-company training centres, which will provide practical training for pupils with apprenticeship contracts with different employers.
Strengthen research collaboration with innovative companies in the funding of higher education institutions and public research institutions	The Slovak Academy of Sciences completed its transformation into a public research institution by January 2022. The change will enable multi-source funding, including private sources, which will increase incentives for cooperation with the private sector.
Expand the use of direct R&D support, such as grants, and make the R&D tax allowance refundable for small and young firms. Evaluate the R&D tax allowance scheme.	The R&D tax allowance was reduced from 200% to 100% of eligible R&D expenditure in 2022.
Promote out-of-court restructuring proceedings, especially for small and medium-sized enterprises.	The EU Directive on preventive restructuring frameworks was transposed in 2022.
Strengthen post-employment restrictions for public officials by extending cooling off periods to senior civil servants involved in top-executive functions and by rules excluding top officials from lobbying activities after leaving office.	No action taken.

Transitioning to carbon neutrality and ensuring energy security

Slovakia has significantly reduced greenhouse gas (GHG) emissions over the past three decades, but progress has slowed in recent years (Figure 1.29). GHG emissions fell by more than 30% in the 1990s thanks to changes in the structure of the economy which led to substantial declines in the emission and energy intensity of the economy (Panel B and C). This included the closure of highly polluting firms, improved energy efficiency, and expanding the share of nuclear power in electricity generation. Emission reductions slowed in the 2000s and have largely stalled since 2015, mainly on account of increasing emissions from transport. In 2021, gross GHG emissions were around 45% below the level in 1990. The emission and energy intensity remains above the EU average, mainly due to Slovakia's higher share of manufacturing in GDP. Further reducing the energy and emission intensity of the economy is not only crucial to meet global climate goals but also to reduce Slovakia's high dependency on imported fossil fuels and to enhance energy security.

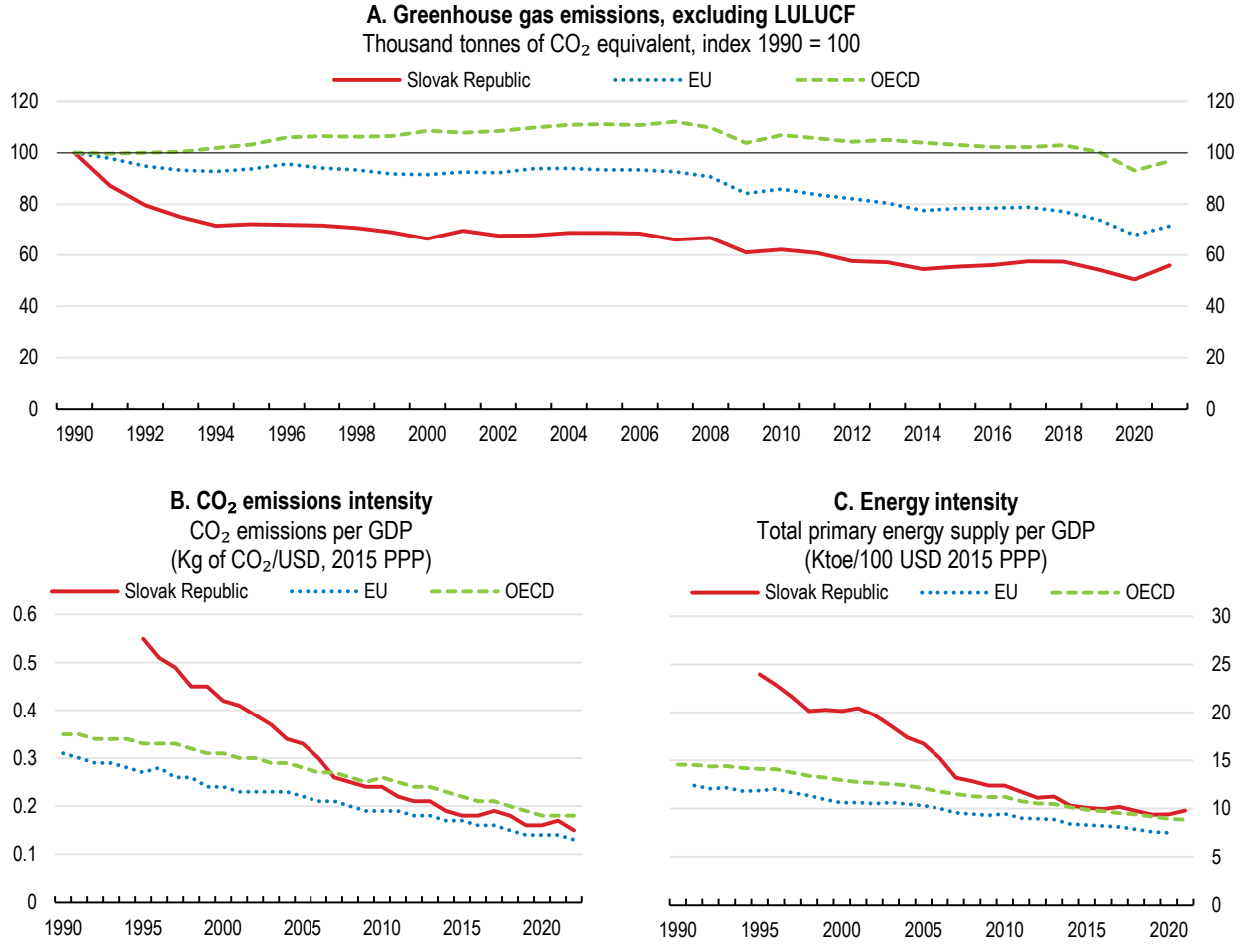
A draft climate bill introduced by the Ministry of Environment in early 2023 would align national climate goals with the Fit for 55 targets of the European Union (Figure 1.30). The draft bill targets greenhouse gas emission reductions of 55% in 2030 compared to 1990, with emission reductions under the EU-ETS of 62% and outside the EU-ETS of 23%, in line with the revised effort sharing regulations (ESR). Slovakia has also endorsed the EU goal of climate neutrality by 2050. Estimates of marginal abatement costs for Slovakia suggest that reaching the 55% reduction target by 2030 would require relatively low net societal costs (including investment and operational costs) of around EUR 2.7 billion (UHP, IEP and BCG, 2022[67]). These estimates are based on the most cost-effective abatement levers and do not take into account other environmental goals, including sectoral or renewable energy targets. Decarbonization beyond this point would require significant additional investments, for instance in the electrification of the steel sector, which is ongoing, and for carbon capture and storage technologies (UHP, IEP and BCG, 2022[67]).

Accelerated policy action is needed to reach climate targets. The updated OECD Environmental Policy Stringency (EPS) indicator (Kruse et al., 2022[68]) suggests significant scope to step-up environmental

policies compared to other OECD countries, in particular in the areas of market-based policies (e.g. carbon taxes) and technology support (e.g. for R&D) (Figure 1.31). The updated Slovak Recovery and Resilience plan, which includes a REPowerEU chapter, allocates around 40% of the total grants or EUR 2.5 billion to environmental measures and measures to reduce dependency on Russian fossil fuels. The plan includes measures for residential renovations, sustainable transport, decarbonisation of industry, the energy infrastructure, renewable energy and green skills.

Climate risks at the municipal level have been identified and can help prioritise investment in climate change adaptation. Slovakia approved an updated Strategy of Climate Change Adaptation in 2018 and an Action Plan in 2021. In cooperation with the OECD, Slovakia identified municipalities most vulnerable to climate hazards. Extreme temperatures and droughts will mainly affect the southern part of Slovakia, including Bratislava. About 16% of the population live in municipalities with the highest risk level of heatwaves. While the share of population under threat from extreme precipitations is relatively low, northern regions are heavily exposed. Climate change adaption is further discussed in the forthcoming *OECD Environmental Performance Review of the Slovak Republic.*

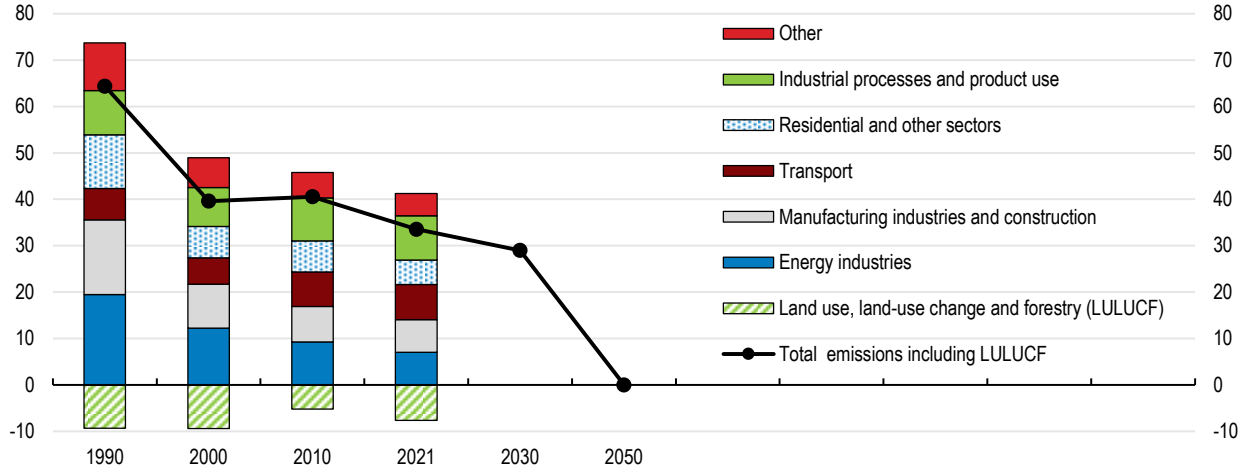
Figure 1.29. Emissions have declined markedly but progress has slowed in recent years



Note: LULUCF refers to land use/land use change and forestry sector.
Source: OECD Environment database; OECD Green Growth database; and International Energy Agency (IEA) database.
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Figure 1.30. Reaching net zero emissions requires accelerated policy action

Greenhouse gas emissions, million tonnes of CO_2 equivalent

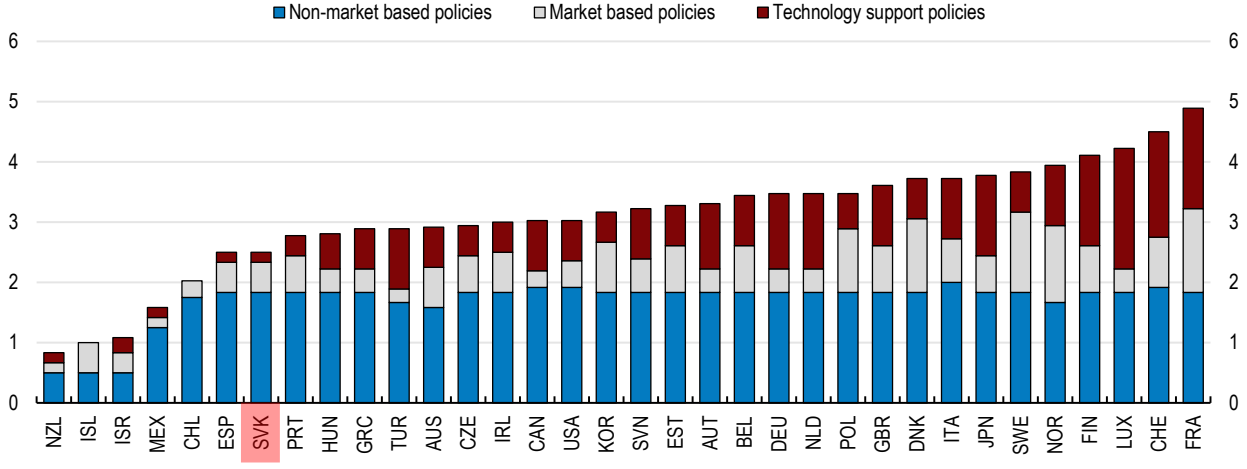


Note: LULUCF stands for land use/land use change and forestry sector. The category "Other" includes emissions from waste, agriculture and fugitive emissions from fuels.
Source: OECD Environment database.

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Figure 1.31. Market-based environmental policies and technology support are underused

OECD Environmental Policy Stringency Index, from 0 (not stringent) to 6 (highest degree of stringency)



Source: OECD Environmental Policy Stringency Index database.

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Strengthening economic incentives to accelerate the pace of emission reductions

Improving carbon pricing

Pricing emissions encourages households, firms and the government to realise the most cost-efficient opportunities to reduce emissions. Due to high uncertainty and information asymmetry about abatement costs across the economy, more directive approaches, such as regulations and standards, raise total abatement costs compared to emission pricing by missing opportunities for low-cost emission reductions. Emission pricing is also technology-neutral and a transparent policy that simplifies the decisions for the government and reduces the scope for lobbying influences, as the only information required is the measurement of emissions. Nonetheless, regulations and standards are also needed to overcome market

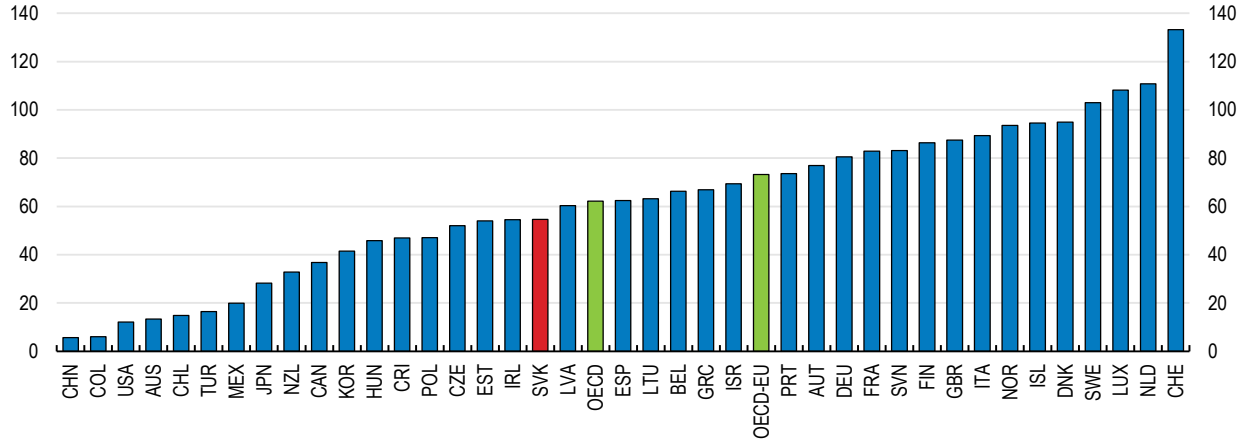
failures and coordination problems, and can help improve the public acceptability of climate change mitigation policies.

Carbon prices are too low to reach environmental targets and vary widely across sectors. Around half of GHG emissions are covered by the EU-ETS, a somewhat higher share than on average in the OECD, due to the larger share of manufacturing in GDP. The EU-ETS price together with fuel excise taxes imply an average effective carbon price of EUR 55 per tonne of CO_2e in 2021, which is relatively low compared to other OECD countries and especially EU countries (Figure 1.32, (OECD, 2022[69])). Moreover, the carbon price is not uniform across the economy. Around 80% of GHG emissions were subject to a positive net effective carbon rate (ECR) in 2021. However, only around 20% of GHG emissions had a net effective carbon rate above EUR 60 per tonne of CO_2e, a mid-range estimate of current carbon costs (Figure 1.33, Panel A). This is low in international comparison. In addition, effective carbon prices vary widely by sectors. For example, the effective carbon price amounted to EUR 160 per tonne of CO_2e in road transport, while it was only EUR 6 per tonne of CO_2e for residential buildings (Figure 1.33, Panel B). The large differences in tax rates across sectors and activities mean that marginal abatement costs are not equalised, increasing the cost of emission reductions.

Environmentally harmful fossil fuel subsidies weaken and distort price signals and should be phased out. In 2021, government support to fossil fuels amounted to around EUR 212 million (OECD, 2023[70]), a relatively low amount in international comparison. A significant part is due to feed-in tariff support for domestic lignite. In November 2018, the government decided to end public support for the mining and production of electricity from lignite by the end of 2023. In addition, coal and natural gas are exempt from excise tax for a number of purposes such as consumption by households, processing of minerals and in combined heat-and-power plants. While subsidies for household consumption of natural gas may improve affordability, the measure is not well targeted, and support should be shifted to align with climate objectives (see below).

Figure 1.32. The effective carbon price is relatively low

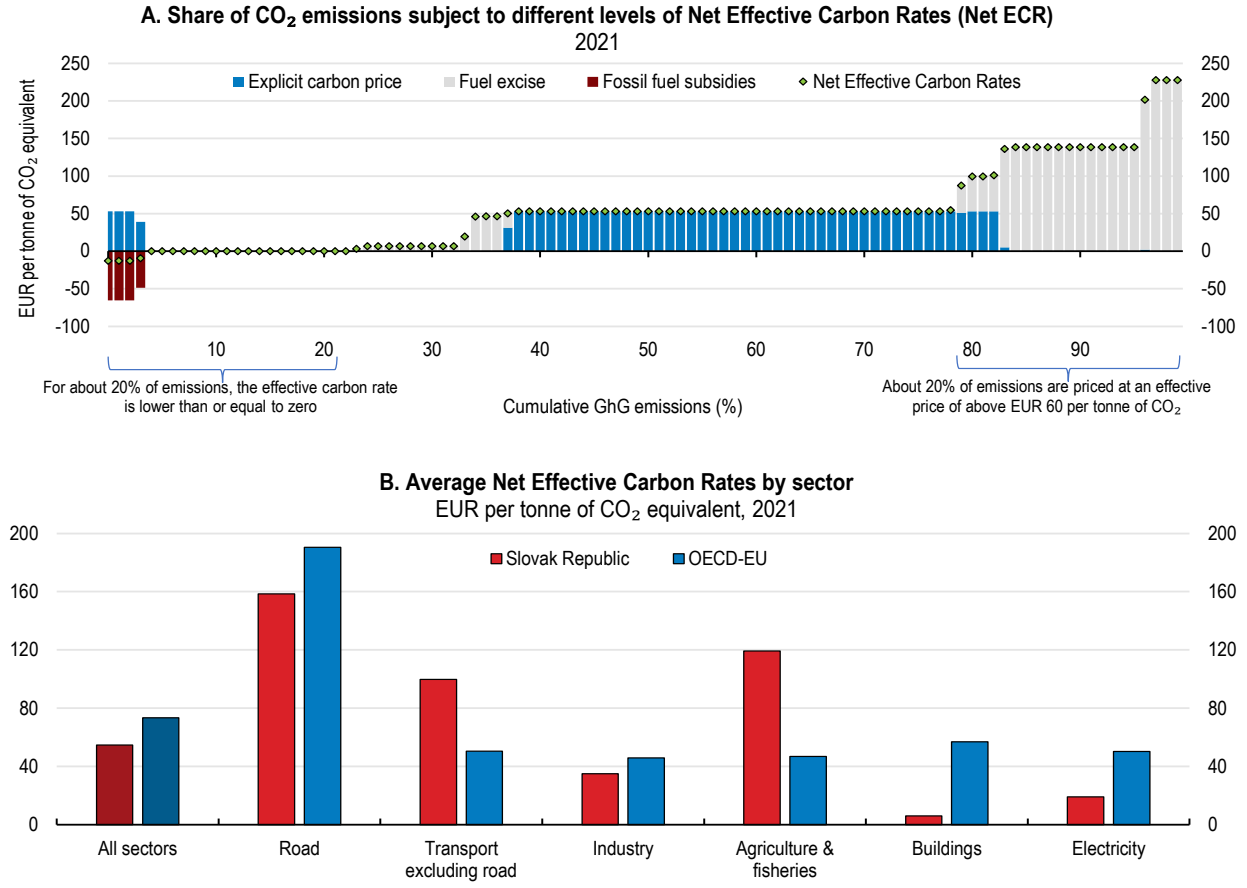
Average Net Effective Carbon Rates, EUR per tonne of CO_2 equivalent, 2021



Note: Excluding biofuels CO_2. Unweighted averages for OECD and OECD-EU (including 22 OECD EU countries plus Cyprus).
Source: OECD (2022), Pricing Greenhouse Gas Emissions: Turning Climate Targets into Climate Action, OECD Series on Carbon Pricing and Energy Taxation, OECD Publishing, Paris, https://doi.org/10.1787/e9778969-en.

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Figure 1.33. Carbon prices vary widely across sectors



Note: Panel A, excluding biofuels CO_2. Unweighted average for OECD-EU (including 22 OECD EU countries plus Cyprus).
Source: OECD (2022), Pricing Greenhouse Gas Emissions: Turning Climate Targets into Climate Action, OECD Series on Carbon Pricing and Energy Taxation, OECD Publishing, Paris, https://doi.org/10.1787/e9778969-en.

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Introducing an explicit carbon tax in sectors not covered by the EU-ETS would send more consistent price signals and make abatement more cost-efficient. Several EU countries have introduced explicit carbon prices outside EU-ETS sectors. For example, Germany implemented a national trading system for emissions in the non-ETS sectors in 2021 with a fixed price of EUR 30 per tonne in 2023, that will rise to EUR 45 in 2025. From 2026, allowances will be auctioned within a price corridor of EUR 55 to EUR 65. As part of the Fit for 55 package, the EU plans to introduce a separate trading system for the sectors under the Effort Sharing Regulation (road transport and residential heating) from 2027. The carbon price in the new system is expected to be lower than in the traditional ETS sector, at least initially. Until the EU system starts operating, Slovakia could set up a national trading system in sectors not covered by the ETS with an emissions cap according to its national targets, similar to the German system. Alternatively, an explicit carbon price outside the EU-ETS could be introduced and an increasing carbon price trajectory announced.

Boosting green investment and innovation

Decarbonising energy-intensive industries will require significant investments and innovation. The (non-energy) industrial sector is the largest emitter of greenhouse gases, accounting for around 40% of total emissions (from fuel use and industrial processes). The basic metals sector alone accounts for around 20% of total GHG emissions, with the majority of emissions stemming from one steel firm. Manufacture of non-metallic mineral products (e.g. cement), petroleum refining and the chemicals sectors are other large

emitters, accounting together for around 10% of total GHG emissions. Decarbonising-energy intensive industries could entail large investments and technologies that are currently at the demonstration or prototype phase (e.g. green hydrogen, carbon capture and storage technologies). The ongoing partial electrification of steel production in Slovakia, by replacing coal-fired furnaces with electric-arc furnaces, has a large abatement potential (about 10% total GHG emissions in 2019) at relatively low estimated marginal abatement costs (32.5 EUR per tonne CO_2e) (UHP, IEP and BCG, 2022[67]).

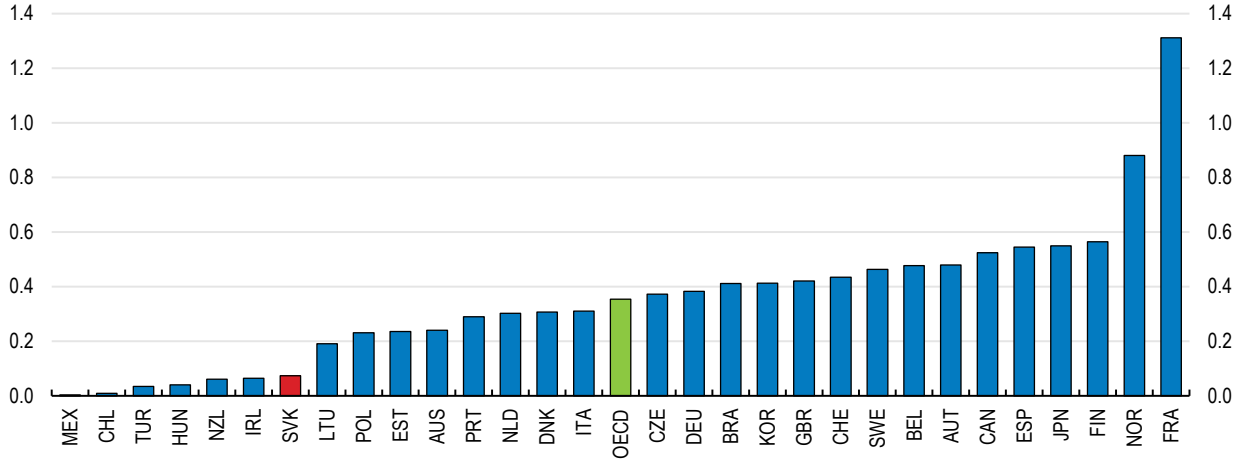
The government should strengthen incentives to boost green investment and innovation. Uncertainty about the future path of carbon prices is an important impediment to private investment in abatement technologies. Credible carbon price trajectories are therefore important to stimulate private investment. In addition, well-designed abatement subsidies can strengthen incentives for green investment as long as carbon prices are not high enough while safeguarding international competitiveness. To support decarbonisation efforts in industry and reduce fossil fuel dependence, the authorities have launched competitive tenders for subsidies amounting to EUR 1.1 billion financed from the EU Resilience and Recovery facility and the EU modernisation fund. Grants under the scheme will be allocated to firms in EU-ETS sectors based on the lowest abatement costs and highest contribution to the overall abatement goal of around 5 million tonnes of CO_2. In 2023, first tenders of around EUR 600 million were awarded to the steel producer to electrify production, as well as to cement and brick producers.

In addition, the authorities could consider introducing Carbon Contract for Difference (CCfD) schemes. CCfD schemes are an efficient way to shield investors against carbon price uncertainty, as a direct link between the level of subsidies and the carbon price is established (Richstein, 2017[71]). Based on a strike price for emissions reductions resulting from an auction, a CCfD guarantees investors a fixed revenue per tonne of non-emitted CO_2. The government reimburses the difference if carbon prices are below the strike price. Conversely, investors return the difference if carbon prices exceed the strike price to avoid windfall profits. The auction design encourages competition and minimises the fiscal cost of reaching policy objectives, as the most cost-effective projects are selected. In the United Kingdom, CCfDs have successfully mobilised the private sector to invest in renewables.

Support to R&D and green public procurement can spur innovation in low-emission technologies. Public support to green R&D can improve the overall cost-effectiveness of the policy mix by reducing future costs of low carbon technologies. Without government support, the level of research is likely to be inefficiently low because of positive knowledge externalities. Environmental inventions are very low in Slovakia. This may partly reflect low public spending on R&D (Figure 1.34). The government should target an increase in green R&D investment, complemented by improved cooperation with other countries, especially in the EU. Moreover, given the importance of public procurement (12% of GDP in Slovakia), green public procurement (GPP) can be an important driver for innovation, providing industry with incentives to develop environmentally-friendly products and services. GPP became mandatory for four product groups in 2020 and the share of GPP increased but remained significantly below the target of 50% of the volume of publicly procured contracts in these product groups by 2020 (OECD, 2022[22]). The authorities should consider gradually extending the mandatory use of GPP criteria as award criteria and apply GPP to additional product groups.

Figure 1.34. Public spending on environmental R&D is low

Public energy research, development, and demonstration (RD&D) budgets, per thousand unit of GDP, 2022 or latest available year



Source: IEA Energy Technology R&D database.

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Reaching net-zero in the energy-intensive industry will likely require substantial investment in carbon capture and storage. Carbon capture costs vary widely across industries and carbon transport and storage are an important part of the total costs. No large carbon storage options exist in Slovakia, implying that carbon captured will need to be transported abroad, for example to saline aquifers in Poland. The costs of establishing a carbon transport storage infrastructure (i.e. pipelines) are high, estimated at close to EUR 5 billion (UHP, IEP and BCG, 2022[67]). Moreover, as it would be inefficient to establish such an infrastructure for each individual emitter, the government will have to play a role in the establishment, domestic and international coordination, and financing of the infrastructure.

Tackling sector-specific challenges

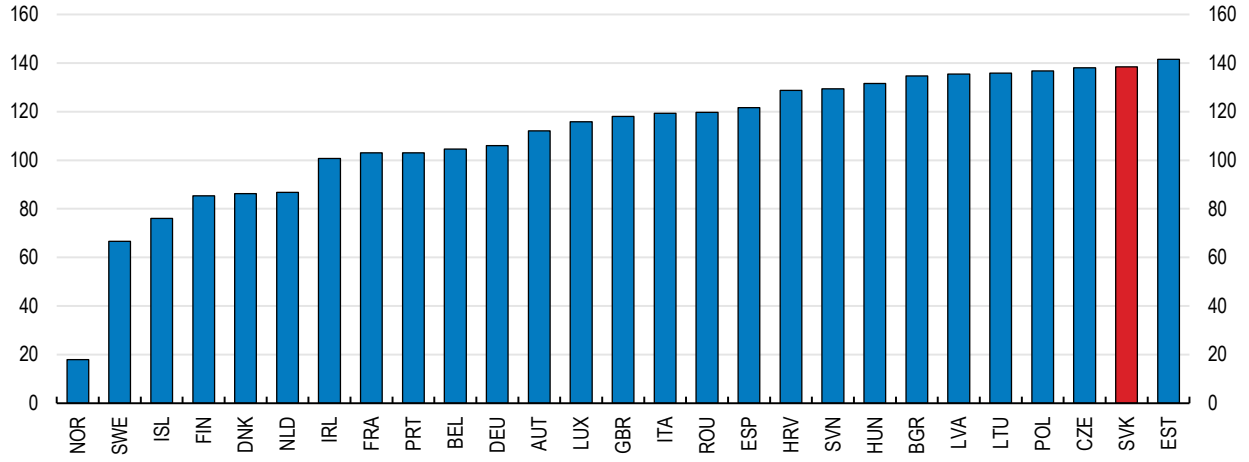
Reducing transport emissions

Emissions in the transport sector continue to increase and the sector is now the second largest source of GHG emissions in Slovakia, contributing around 20% to total emissions. Vehicle ownership is still below the EU average but likely to increase in the future as incomes converge. Hence, decarbonising the transport sector will require increasing the share of low- or zero emission vehicles and shifting transport off the road. GHG emissions from the residential sector account for around 13% of total emissions. Policies to decarbonise the residential sector are discussed in detail in *Chapter 2.*

The car fleet is older and more polluting than in other EU countries. The average age of the passenger car fleet is about two years above the EU average (14.3 compared to 12 years, (ACEA, 2023[72])). The share of alternative-fuelled cars (e.g. battery electric vehicles, plug-in hybrids) in the total passenger car fleet was 2.2% in 2022, less than half of the EU average (EC, 2023[73]). The share of zero-emission vehicles in newly registered passenger cars in Slovakia has increased from a low base but remains low at 1.8% in 2022 (compared to EU average of 10%) (EC, 2023[73]) and the carbon emissions of new cars are among the highest in the EU (Figure 1.35).

Figure 1.35. Carbon emissions of new cars are high

Average CO_2 emissions from new passenger cars, grams per km, 2022



Note: Based on WLTP (Worldwide harmonized Light vehicle Test Procedure).
Source: European Environment Agency (EEA).

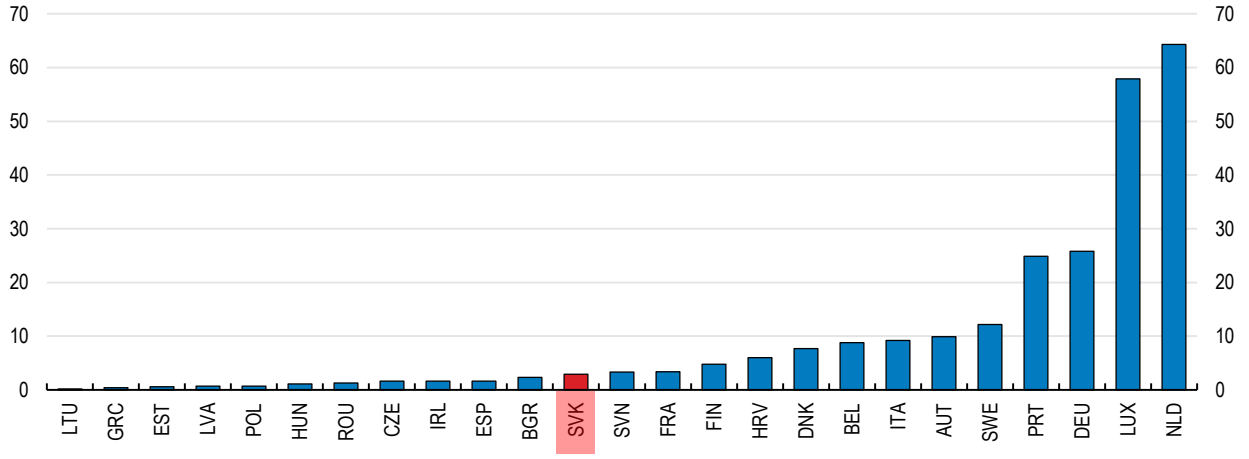
StatLink https://stat.link/dcf71m

Incentives to shift to less polluting cars should be strengthened. Electric vehicles are on average 10% more expensive to buy than a combustion engine car in Slovakia, but the operating costs are 20% lower per year. Hence, electric vehicles are economical already four years after purchase (UHP, IEP and BCG, 2022[67]). Reasons for not purchasing electric vehicles despite these cost advantages include myopia, high uncertainty regarding future fuel prices, a lack of reliable information on cost differences, and concerns about practicability, such as range and the availability of charging stations (IEA, 2022[74]). To enable consumers to conduct more accurate cost comparisons, the government can require car dealers to prominently display the total typical cost of vehicle ownership for consumers (Agora Verkehrswende, 2022[75]). In addition, the charging infrastructure is lagging behind other EU countries, although it is denser than in most CEE peers (Figure 1.36). The Recovery and Resilience plan foresees an increase in charging points but implementation is delayed. Moreover, to achieve a faster replacement of the vehicle fleet, the government could also consider offering specific incentives to scrap old vehicles and replace them with newer models. Furthermore, Slovakia's one-time registration tax depends on the Euronorm and engine power and could be refined to reflect the emissions of the car more directly. This is could be complemented by expanding the annual ownership tax, which currently only applies to company cars, to all private cars and linking it to vehicle emissions. Finally, Slovakia should close the gap between petrol and diesel excise taxes. Diesel fuel is taxed at a significantly lower rate than petrol, despite diesel's higher emissions of air pollutants per litre (e.g. nitrogen oxides and fine particulates). A coordinated approach with neighbouring countries could be pursued to avoid diesel fuel tourism.

Moving transport off the road requires further investment in the rail infrastructure. The network of railway lines is relatively dense. However, there is a lack of high-speed rail infrastructure and large sections are not electrified and are single-track, reducing their speed and capacity (IEP, 2022[76]). Less developed regions, and regions where populations commute the longest distances and have the oldest car fleets, generally also suffer from the lowest access and quality to railway infrastructure. In 2022, the government approved plans for railway infrastructure projects in the total amount of almost EUR 4.5 billion until 2030. The Recovery and Resilience plan includes investments in the railway infrastructure in the amount of EUR 476 million until 2026. Implementing these plans without delay will require further progress in public investment governance and management as described above.

Figure 1.36. The charging infrastructure is lagging behind

Charging points per 100km of road, 2021



Source: European Automobile Manufacturers' Association (ACEA).

StatLink https://stat.link/alnwv8

Increasing renewable energy

The planned phasing out of coal will further reduce the already low carbon intensity of electricity generation. The remaining two coal power plants will be decommissioned in 2023 and 2024. Instead, one new nuclear power plant went online in 2023 and another one is planned to operate by 2025. This is expected to bring the share of nuclear in electricity generation to well over 60%. Renewable sources (mainly hydropower) account for around 22% of total electricity generation. Hence over 85% of electricity generation could be carbon free by 2025. Solar and especially wind play a negligible role in energy generation. Expanding renewables will be crucial to meet substantially expanding electricity demand with the electrification of industrial production and transport, and new energy-intensive industries, such as the new electric vehicle car factory and battery cell manufacturers. There is also potential to increase renewables in heat generation, which currently account for around 20% of total heat generation, mostly from biomass (see Chapter 2).

The expansion of renewables can be further facilitated. Slovakia ended the moratorium for connecting new renewables to the grid in April 2021. In 2022, important legislative changes were also passed to facilitate access of renewable electricity sources to the grid and stimulate cross-border energy cooperation with Hungary. The Recovery and Resilience plan and REPowerEU chapter include investments in renewable energy generation and the network transmission capacity. The uptake of renewable energies can be further facilitated by streamlining administrative and permit procedures, including by simplifying and digitalising the Environmental Impact Assessment (EIA), integrating the EIA and construction permitting into a single procedure and establishing an administrative one-stop-shop (EC, 2023[27]). Moreover, grid connection fees can be lowered and access to available grid capacity further improved. There is also large potential to modernise the transmission and distribution networks, create new energy storage facilities and complete the regulatory framework for renewable hydrogen (EC, 2023[27]).

Addressing the distributional and labour transition effects of climate policies

Employment in sectors directly affected by the green transition is large in international comparison. The most polluting industries, including refineries, chemicals, basic and fabricated metals and non-metallic mineral products, employ about 6% of the workforce in Slovakia, compared to 3% on average in OECD countries. Similarly, (Tyros, Andrews and de Serres, 2023[77]) and (Causa and Soldani, 2023[78]) estimate that around 9-10% of employees work in brown occupations (4-6% on average in OECD countries), with

around 2% of jobs in occupations requiring skills that are not easily transferable to green jobs (Tyros, Andrews and de Serres, 2023[77]). Moreover, the transition to electromobility will impact Slovakia's automotive manufacturing sector, which is among the largest in the OECD in terms of its share in total employment (3.4%). Slovakia is relatively well placed to benefit from this transition. In 2020, Slovakia produced the second highest number of electric cars in the EU and a car manufacturer recently announced a new production facility of electric vehicles by 2026. Overall, the authorities expect job losses in the automotive industry to be modest (around 3000 jobs) (IEP, 2022[76]). Finally, the end of coal mining and energy generation from coal directly affects around 2000 jobs, mainly in the Trenčín /Upper Nitra region.

Policies to facilitate labour reallocation and re-and upskilling need to be stepped up. While the green transition is likely to have limited aggregate employment effects (OECD, 2021[79]), it will imply shifts from more polluting to less polluting sectors or firms within sectors. Moreover, greener production processes (e.g. electric furnaces for steel production) or products (e.g. electric vehicles) will require new or modified skills of the workforce. Active labour market policies are an important tool to ensure labour market resilience and flexibility, by helping workers displaced by the green transition find jobs more quickly, and to effectively match jobseekers with emerging job opportunities (Botta, 2019[80]). As discussed in detail above, Slovakia spends relatively little on active labour market policies, especially on training programmes compared to OECD peers. Moreover, few employees participate in life-long learning programmes.

Regional development policies can mitigate the impact on the most vulnerable regions. The regions Trenčín /Upper Nitra (e.g. coal mining and energy generation), Košice (e.g. steel and cement production) and Banská Bystrica are most affected by the green transition due to their high share of energy and emission intensive firms. Lessons learned from transitions in other countries suggest that regional strategies that have wider socioeconomic focus beyond jobs can help to overcome adverse effects of economic disruption by promoting economic development. Policies include financial support to regional governments, relocation grants to support geographic mobility or on-site career counselling. Engaging local stakeholders from higher education institutions, innovative businesses, regional and local governments and building consensus around future specialisations is key (OECD, 2021[81]) (OECD, 2023[82]). In 2022, the European Commission approved EUR 459 million through the Just Transition Fund to support job creation, re- and up-skilling, energy efficiency and renewable energy projects in Slovakia's most vulnerable regions. An *Action Plan for the Transformation of the Upper Nitra Coal Region* was approved in late 2022 and includes measures to improve transport and digital infrastructure, and support for new jobs and SMEs as well as measures to improve the environment in the region.

The impact of climate policies on vulnerable households needs to be addressed. Slovak households are particularly sensitive to higher energy prices as energy products make up a comparatively high share of consumption compared to other EU countries. Moreover, lower income households spend a larger share of total expenditure on energy (IEP, 2022[76]). Many OECD countries therefore recycle revenues of environmental taxes to address distributional concerns (D'Arcangelo et al., 2022[83]). Lump-sum transfers (as in Switzerland) are efficient and simple to administer but not well targeted and hence expensive. Targeted transfers to low-income households (as in British Columbia) may therefore be preferable. Several countries have also used revenues to lower other taxes such as personal income taxes (e.g. Austria, British Columbia). In Slovakia, revenues from higher environmental taxes or from the phasing out of tax exemptions for the use of fossil fuels could be used for example to lower the high labour tax wedge, in particular for low-income households. A system to support energy poor households should be designed, including a clear definition of energy poverty and addressing data requirements to identify and target eligible households (see above). Slovakia is also expected to receive EUR 1.7 billion from the new EU Social Climate Fund to mitigate distributional impacts of the Fit for 55 package.

Support to enhance energy efficiency of buildings and public transport is particularly needed in some regions. Higher carbon prices in the residential and transport sectors will particularly affect households in the Prešov, Košice and Banská Bystrica regions (IEP, 2022[76]). Many households in these regions rely on

individual heating, with around 34 000 households still heating with coal (IEP, 2022[76]). To avoid that these households switch to wood burning, with negative effects on air pollution and Slovakia's ambitious carbon sequestration targets through forests, the authorities should enhance support for the replacement of boilers and energy efficiency measures (see Chapter 2). Households in these regions are also particularly dependent on cars, as the coverage and quality of the railway infrastructure is insufficient. Hence, the expansion of public transport should be prioritised in these regions.

Table 1.10. Past OECD recommendations on environmental policies

Recommendations in previous Surveys	Actions taken since 2021
Introduce an explicit carbon tax in sectors not covered by the EU-ETS and gradually phase out remaining environmentally harmful subsidies.	Subsidies for coal in electricity generation end in 2023.
Accelerate the green transition by investing in energy efficiency renovation in buildings and sustainable transport.	The updated Slovak Recovery and Resilience plan and REPowerEU chapter allocate around 40% of the total grants or EUR 2.5 billion to climate objectives, including building renovations and sustainable transport.
Continue to increase the landfill tax to better reflect environmental costs.	The amendment of the Waste Act in 2022 foresees an increase in the landfill tax.
Expand the coverage of pay–as-you-throw systems and consider introducing a tax on waste incineration in the medium-term	In 2022, Slovakia introduced a deposit refund system for single-use drink containers.

Table 1.11. Recommendations on macroeconomic and structural policies

Main findings	Recommendations (key in bold)
Strengthening the recovery and ensuring debt sustainability	
The fiscal position has deteriorated markedly since 2019. Inflation remains elevated.	**Start fiscal consolidation while providing targeted support to households not sufficiently covered by the social safety net if needed**.
Medium- and long-term fiscal pressures especially related to ageing are high. A recent spending review of the healthcare sector has identified savings potential of EUR 425 million, especially related to the inefficient use of pharmaceuticals.	**Prepare a credible medium-term fiscal consolidation plan to ensure fiscal sustainability, drawing on spending reviews to improve the efficiency of expenditures.** Expand cost-effectiveness evaluations of pharmaceuticals and promote the use of generics and biosimilars.
Data gaps and legal provisions related to data protection hinder better targeting.	Allow for accessing, linking and analysing administrative datasets across levels of government to better target social benefits, while ensuring adequate data protection and confidentiality standards.
Slovakia has made progress in reducing its high dependency on Russian energy imports.	Continue efforts to diversify energy sources and to strengthen energy security.
Financial vulnerabilities related to rising interest rates are elevated. PISA tests indicate a low level of financial literacy in Slovakia.	Closely monitor risks in the corporate real estate market, and adjust macro-prudential measures if necessary. Strengthen financial resilience by boosting financial education and inclusion.
The labour tax wedge is high, particularly for low-income earners. The tax burden on labour is high, while taxes on property are underutilized.	**Reduce the tax wedge in particular for low-income earners.** **Shift the tax mix from labour towards property and environmental taxes.**
Behavioural risk factors contribute to preventable mortality, which is among the highest in the OECD.	Increase excise taxes on unhealthy products (alcohol, tobacco and sugary products).
The number of goods and services on reduced VAT rates has been recently increased. The tax compliance gap remains above the EU average.	Enhance tax collection by phasing out VAT exemptions and reduced rates, and further strengthening tax compliance for example by pre-filling tax returns and education programmes for SMEs.
The funding gap in the public pay-as-you-go pension system is significant. The effective age of retirement is low. A new early retirement scheme has been introduced, allowing retirement after 40 years of contributions.	**Link the minimum number of years of contributions required for early retirement to increases in the statutory retirement age.** **Equalise the penalties of early retirement options and apply rules of actuarial neutrality to ensure pension sustainability.** Phase out the early retirement option for mothers.
The disability pension is used as a pathway to early retirement	Make rehabilitation mandatory for receiving partial disability pensions.
Pension expenditures are expected to increase by around 3.5% of GDP by 2060. Net pension replacement rates are above the OECD average. Relative income poverty rates of elderly people are low.	Cancel the 13th pension for high-pension beneficiaries and the parental bonus. Consider taxing pension benefits, while protecting vulnerable pensioners.
Childcare facilities are insufficient, especially in some regions. Paid parental leave is longer than elsewhere, negatively affecting the career prospects of mothers and gender wage equality. Flexible working arrangements are scarce.	**Expand the supply of high-quality affordable childcare facilities, especially in underserved regions.** **Reduce the maximum duration of parental leave and make part of it conditional on the second parent's participation.** Expand flexible working arrangements.
Public investment lags behind peers and the absorption rate of EU funds has been historically low, largely reflecting deficiencies in project planning and preparation. Public spending efficiency is low especially for transport investment projects.	Ensure the central appraisal of large transport infrastructure projects by the investment authority at an early preparation stage. **Strengthen project preparation and implementation capacity at line ministries and lower levels of government via targeted training.** Monitor project implementation and systematically assess projects ex-post.
About 95% of contracts in Slovakia were awarded based only on the lowest price.	Expand the use of quality-related and lifecycle cost criteria in public procurement.
Sustaining productivity growth	
Little information is available on the quality of VET providers.	Provide information on wage returns of graduates of VET training institutions.
The research quality of higher education institutions is low, many students leave the country to study abroad and few of them return after their studies.	**Expand the use of targeted funds for higher education institutions to reward teaching and research excellence.**

Main findings	Recommendations (key in bold)
The share of unemployed adults participating in formal and non-formal learning is low. Spending on active labour market policies is low. Spending on training is low.	**Expand active labour market programs, in particular re-training measures for the low-skilled and persons at risk of job loss.**
Business R&D spending is low.	**Make the R&D tax allowance refundable for small and young firms.** Expand the use of direct R&D support, such as competitive R&D grants.
According to the EU Justice Scoreboard Slovakia lags other countries in the promotion of and incentives for using alternative dispute resolution methods.	Promote the use of alternative dispute resolution methods to further improve judicial efficiency.
Levels of perceived corruption remain high and judicial independence low.	Continue efforts to fight corruption and strengthen trust in the judiciary system, including by ensuring that the members of the judicial council are subject to sufficient guarantees of independence as regards their dismissal. **Introduce regulations on lobbying and strengthen the legislation on conflicts of interest and asset declarations.**
Transitioning to carbon neutrality	
The effective carbon price is relatively low and carbon prices vary significantly across sectors in the economy. Fossil fuel subsidies and tax expenditures weaken price signals and can jeopardise climate goals.	**Phase out tax exemptions for the use of fossil fuels and introduce a carbon tax in for all sectors not covered by the EU ETS. Mitigate the impact on vulnerable households via targeted transfers.**
Green innovation and R&D investment is low and highly dependent on EU funding.	Expand the use of competitive grants to support green R&D.
Decarbonising industry requires large investments in green technologies.	Consider the use of Carbon Contract for Difference schemes to stimulate investment in green technologies.
The car fleet is older and more polluting than in other EU countries. Less developed regions, and regions where populations commute the longest distances and have the oldest car fleets, generally also suffer from the lowest access to and quality of railway infrastructure.	Link the annual vehicle ownership tax to vehicle emissions and expand the tax to all private vehicles. **Accelerate investment in public transport, subject to cost-benefit analysis, especially in the quality of the rail network in underserved areas.**
The share of renewables, especially wind and solar, in energy generation is low.	Simplify the permitting and administrative procedures for setting up renewable energy capacity and access to the electricity grid.

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2 Enhancing the efficiency, inclusiveness, and environmental sustainability of housing

Federica De Pace, OECD

Housing affordability has deteriorated in the past decade. There is scope for eliminating barriers to expand housing supply by reforming land use policy and streamlining the administration of building permits. Measures can be taken to promote the expansion of the rental market and reform housing taxation to reduce the bias in favour of owner-occupied housing. Ensuring adequate supply and funding for construction and operation of social housing is crucial to improve living conditions for the most vulnerable. Accelerating the formalisation of property rights in Roma settlements would help to provide basic infrastructures for adequate access to water and sanitation. Implementing stricter regulation and targeted financial assistance to households most in need would help incentivise housing renovations, reduce energy poverty and advance environmental objectives.

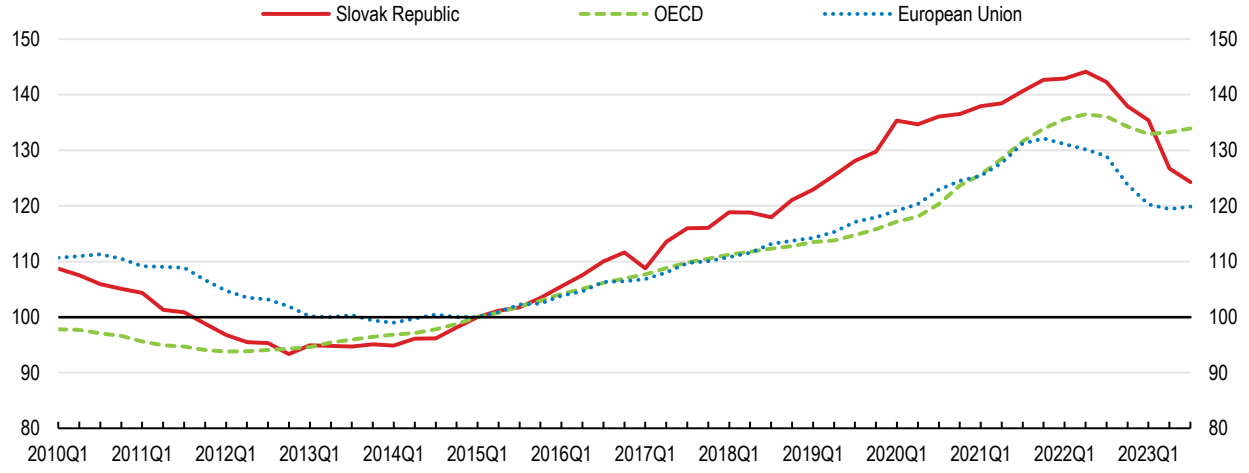
Households struggle with housing affordability and quality

Housing plays a vital role in people's lives. It absorbs a large share of households' income. Its quality affects health and well-being. Its environmental performance raises issues of energy poverty and determines emissions of greenhouse gases and air pollution. Housing homeownership rates shape workers' mobility decisions, with consequences for the labour market, growth, and inequality. This chapter documents the main structural challenges facing the Slovak housing market and proposes solutions to boost its efficiency, promote affordability and inclusiveness, and accelerate environmental sustainability.

Housing affordability has become increasingly challenging in Slovakia. From 2015 to 2022, real house prices rose more quickly than on average in the OECD and the euro area (Figure 2.1). Over the same period, the price-to-income ratio increased substantially despite stable interest rates, making housing less affordable for many (Figure 2.2). The COVID-19 pandemic further exacerbated the affordability challenge. In an environment of low interest rates, the combination of strong housing demand, high household savings, and weak housing supply, led to a historically high real house price growth. The year-on-year average quarterly growth rate of house prices per square meter reached 15% between the second quarter of 2020 and the second quarter of 2022, well above the pre-pandemic (2015-2020) rate of 4.2%. By contrast, since the second half of 2022 the energy crisis and monetary policy tightening have put downward pressure on housing demand, leading to falling house prices and a declining price-to-income ratio. However, while house prices dropped, the price to income ratio remains high and mortgage costs increased, so that housing affordability remains a challenge (NBS, 2023[1]).

Figure 2.1. House prices increased substantially until recently

Real house price, index 2015Q1 = 100, seasonally adjusted



Note: European Union refers to the 27 member countries except Greece.
Source: OECD Price Statistics database; OECD Economic Outlook: Statistics and Projections database; Eurostat; and OECD calculations.
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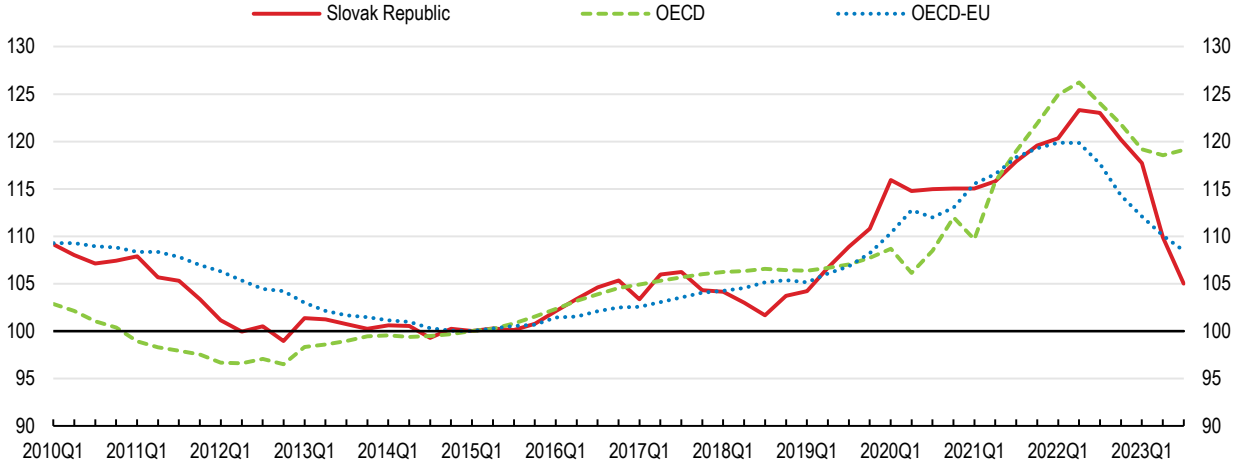
Homeownership rates are very high; this is generally associated with lower wealth inequality but does not encourage residential and labour mobility. Following the privatisation of state-owned housing during the transition to a market economy in the early 1990s, Slovakia records one of the highest homeownership rates among OECD countries. Most households (91.4%) own their homes, while less than 7% of households formally rent on the private rental market, and an even lower share (0.7%) has access to subsidised rental housing (OECD, 2020[2]). High homeownership rates contribute to very low levels of residential mobility (Figure 2.3). This reflects concerns over potential capital losses associated with selling a home, also due to high regional differences in house prices (Figure 2.4), and limited rental housing options (Van Ommeren and Van Leuvensteijn, 2005[3]). Low residential mobility, in combination with inadequate transport infrastructure is associated with low labour turnover, the lowest among OECD

countries, suggesting that barriers to residential mobility hamper the efficient reallocation of workers. This exacerbates issues related to skill shortages, negatively affecting employment and growth (Caldera Sánchez and Andrews, 2011[4]; Causa, Luu and Abendschein, 2021[5]). Low mobility also contributes to widening regional inequalities in terms of economic performance and living standards, as it prevents households from finding jobs in higher-paying regions or neighbourhoods with access to better schools (OECD, 2021[6]). Moreover, with the combination of high homeownership rates across the entire income distribution and often low-quality of the housing stock (see below), many homeowners have limited means to upgrade them and limited access to viable, affordable housing options.

The underdeveloped rental market is particularly problematic for younger people. With typically lower income and wealth and greater likelihood of being employed in unstable or informal jobs than older groups, the young are much less likely to be able to afford a mortgage and own their home (Cournède and Plouin, 2022[7]). This partly explains the high proportion of young Slovaks (between 18 and 34 years old) who live with their parents (Figure 2.5, Panel A). A lack of valid alternatives to homeownership results in high overcrowding rates across the entire income distribution (Panel B).

Figure 2.2. House prices have increased faster than incomes until 2022

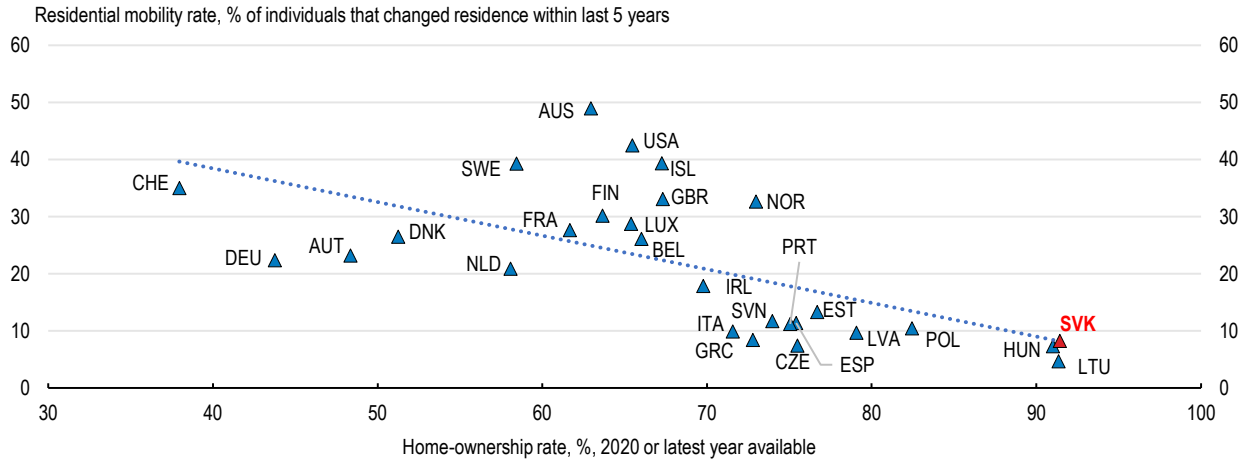
Price to income ratio, index 2015Q1 = 100, seasonally adjusted



Note: OECD-EU refers to EU member countries that are also members of the OECD (22 countries).
Source: OECD Price Statistics database; OECD Economic Outlook: Statistics and Projections database; Eurostat; and OECD calculations

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Figure 2.3. Homeownership is negatively correlated with residential mobility



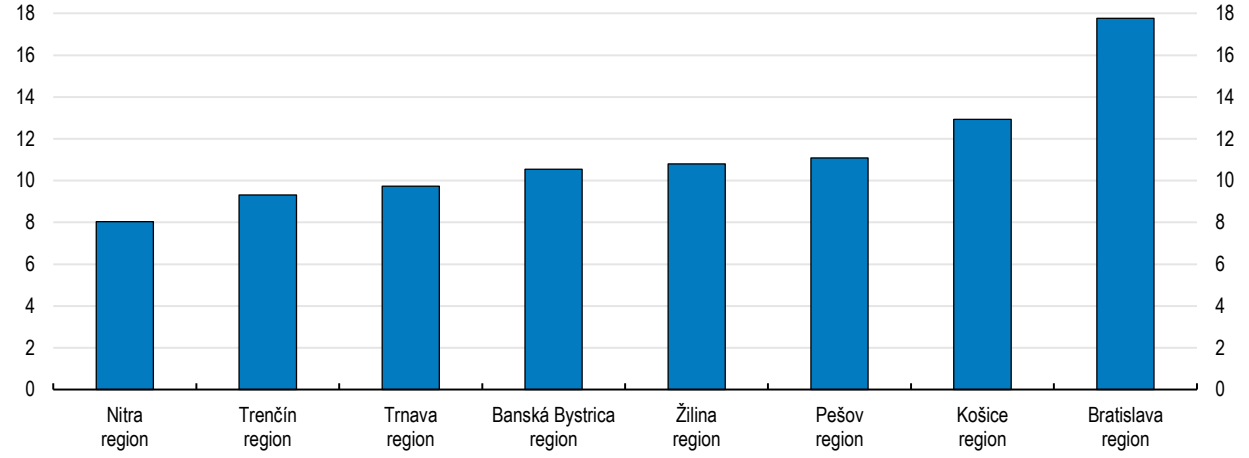
Source: OECD Affordable Housing database; and OECD (2021), Brick by Brick: Building Better Housing Policies, OECD Publishing, Paris, https://doi.org/10.1787/b453b043-en.

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Many low-income households live in poor housing conditions and are overburdened by housing costs. More than 25% of households in the bottom quintile of the income distribution live in overcrowded dwellings, and almost 7% of poor households - with income below 50% of median equivalised income - live in dwellings without flushing toilets (OECD, 2020[2]). These issues are particularly pronounced in the Eastern regions and among certain population groups, such as the Roma community, where the overcrowding rate reaches 86% and almost a third of the population lives in dwellings without access to tap water (European Union Agency for Fundamental Rights, 2022[8]). Moreover, about one in every three low-income households is overburdened by housing costs and energy poverty is a pressing issue. A significant share of housing-related expenses comes from electricity and heat bills (Figure 2.6, Panel A), which account for 8.5% of households' total expenditure, one of the highest rates among OECD countries. This results in many poor households (15%) not being able to keep their dwelling adequately warm (Panel B).

Figure 2.4. Regional differences in housing affordability are high

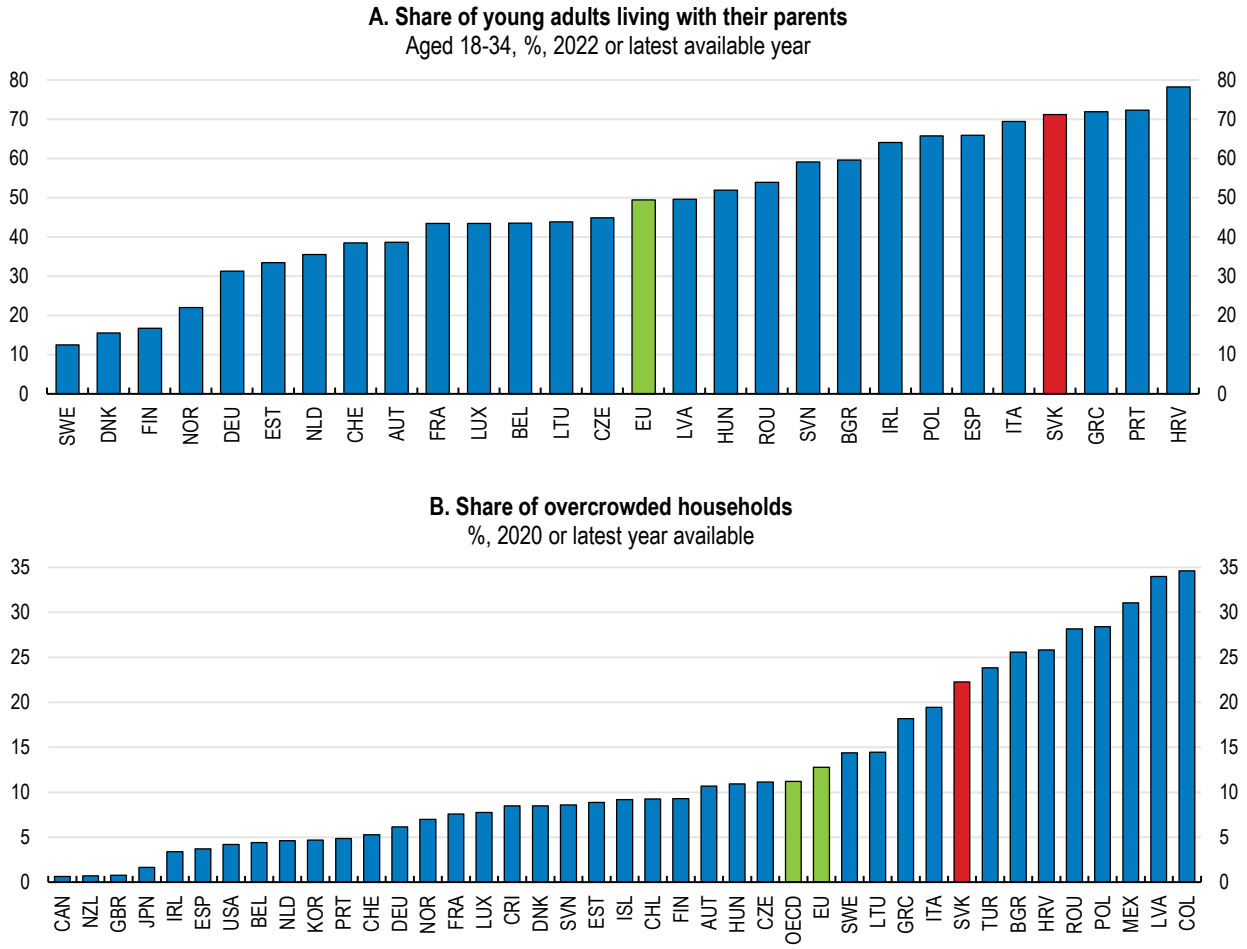
Number of years over which cumulated average household disposable income equals the average price of a 100 m² dwelling, 2022



Source: National Bank of Slovakia (NBS); Statistical Office of the Slovak Republic; and OECD calculations.

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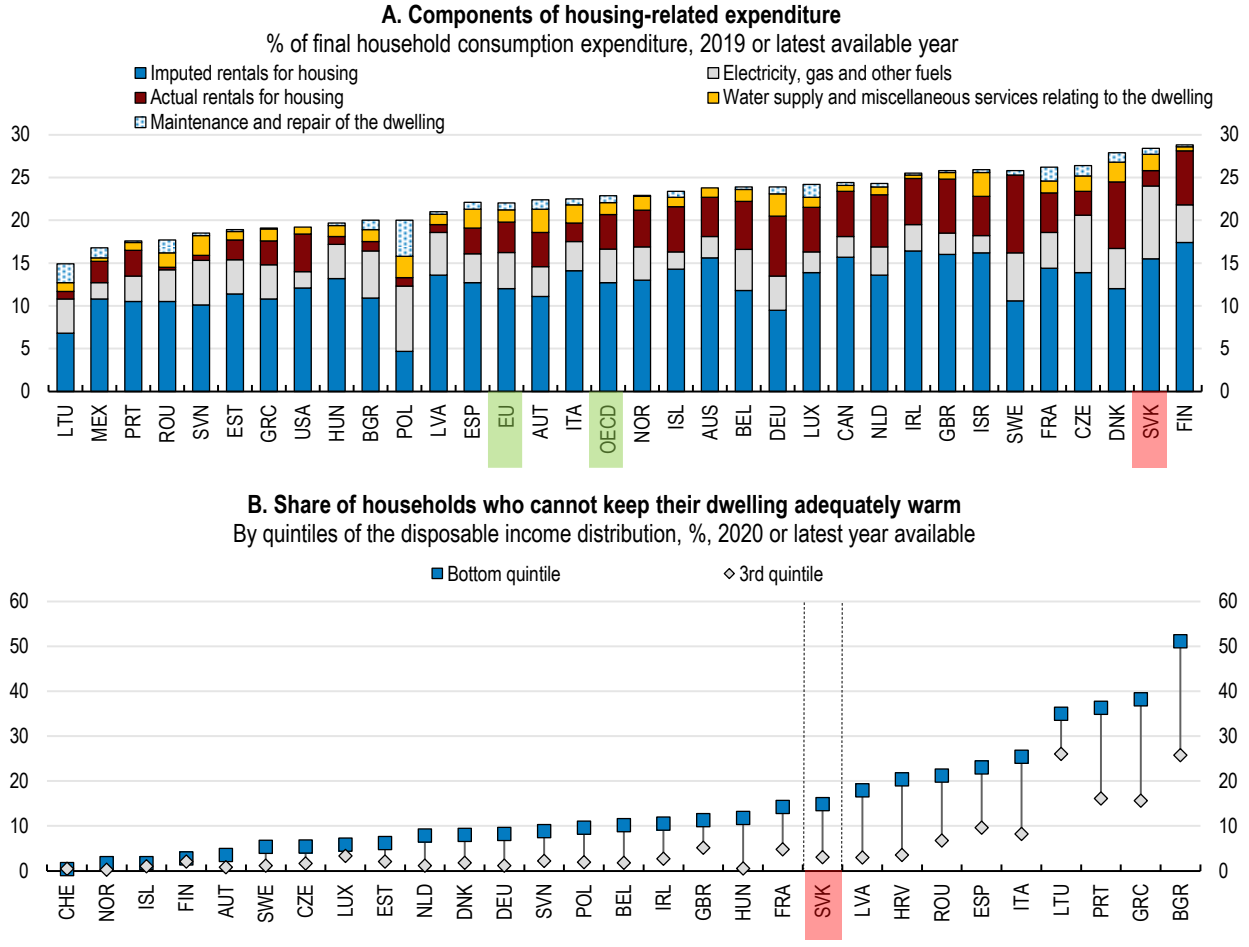
Figure 2.5. Many young adults live with their parents and overcrowding is common



Source: Eurostat, EU-SILC database; and OECD Affordable Housing database.

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Figure 2.6. Electricity and gas bills account for a high share of housing-related expenditure

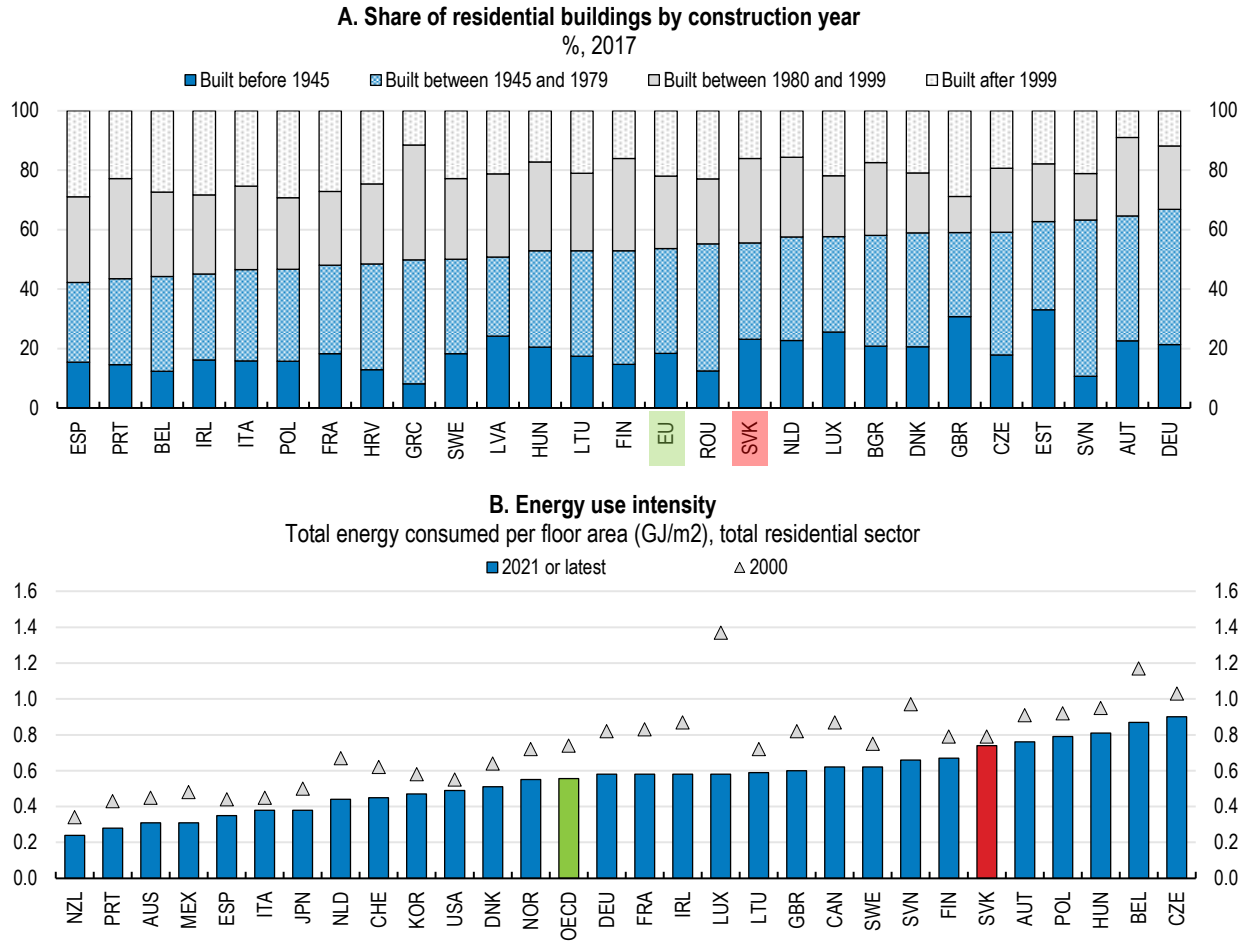


Source: OECD Affordable Housing database.

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The often poor-quality of the housing stock contributes to energy poverty, high pollution, and high emissions. The housing stock comprises in large part prefabricated buildings that were constructed during the communist era with substandard material and methods (Ministry of Trasport and Construction, 2020[9]). These buildings suffer from poor thermal performance, resulting in high energy consumption, and energy intensity in the residential sector remains relatively high (Figure 2.7), contributing to high costs for households for electricity and heat. The sharp rise in fossil fuel prices since the onset of Russia's war of aggression against Ukraine puts additional pressure on household budgets and highlights the importance of improving energy efficiency in housing. The poor quality and insulation of the housing stock and the frequent use of inefficient domestic heating systems, such as boilers and heaters burning poor-quality fuel, contribute to high GHG emissions and air pollution. This jeopardises environmental goals and leads to elevated premature mortality, amounting to around 3 918 annual premature deaths every year due to air pollution in 2020 (EEA, 2020[10]).

Figure 2.7. The housing stock is old and energy inefficient



Note: In Panel B, OECD is an unweighted average of the available countries, shown in the figure.
Source: European Commission, EU Building Stock Observatory database; and International Energy Agency (IEA).

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Boosting housing market efficiency

Strong housing demand and sluggish supply contributed to the 2015-2022 run-up in house prices. As in many other OECD countries, a significant increase in households' income and steady decline in unemployment have boosted the demand for homeownership (Figure 2.8, Panel A, B). Additionally, the long period of accommodating monetary policy that ended in 2022, coupled with competition among Slovak banks, led to record-low mortgage rates and a surge in the number of mortgage holders (Panel C) (European Mortgage Federation, 2022[11]).

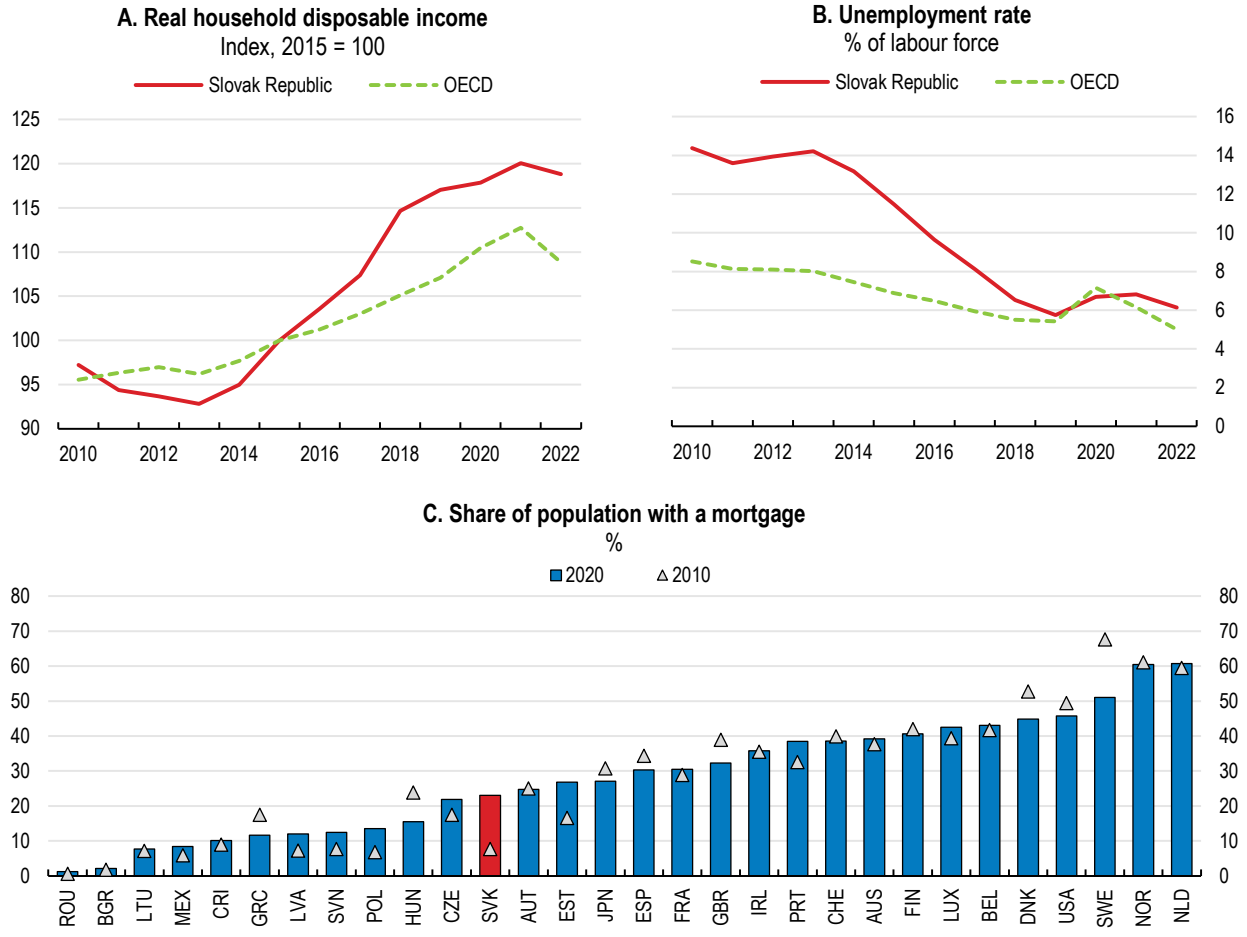
Nevertheless, total investment in housing as a percentage of GDP has remained below the OECD and EU averages (Figure 2.9, Panel A) and the number of dwellings per thousand inhabitants is among the lowest in OECD countries (Panel B). The Ministry of Transport estimates a housing deficit of around 200 000 units taking into account current housing availability and the demographic evolution (Ministry of Transport and Construction, 2020[12]).

More recently, house prices have started to fall, but affordability remains a concern. Tightening monetary policy has deflated housing demand resulting in a slowdown in the number of housing transactions (NBS, 2023[1]). This led to house prices peaking in June 2022. However, the house price to income ratio remains high (at 118% in the first quarter of 2023) and the fall in prices has not been enough to offset the rising

costs of mortgages (NBS, 2023[1]; European Commission, 2023[13]). Additionally, the inflow of more than 100 000 Ukrainian refugees (about 2% of the population) puts additional pressures on the demand of affordable housing.

Reforms to housing policies are needed to ensure that housing demand and supply are aligned. First, there is scope for eliminating barriers to expand housing supply in response to demand pressures by reforming land use policy and improving the administration of building permits as planned. Second, measures can be taken to promote the expansion of the rental market and reform housing taxation to reduce the bias in favour of owner-occupied housing, thereby mitigating demand pressures. Finally, there is room to raise productivity in the construction sector, which currently faces several issues, including a shortage of skilled labour and lack of innovation (ECSO, 2021[14]). Improving education and training, as well as fostering innovation capacity and digital adoption, as discussed in *Chapter 1,* would help ease housing supply bottlenecks.

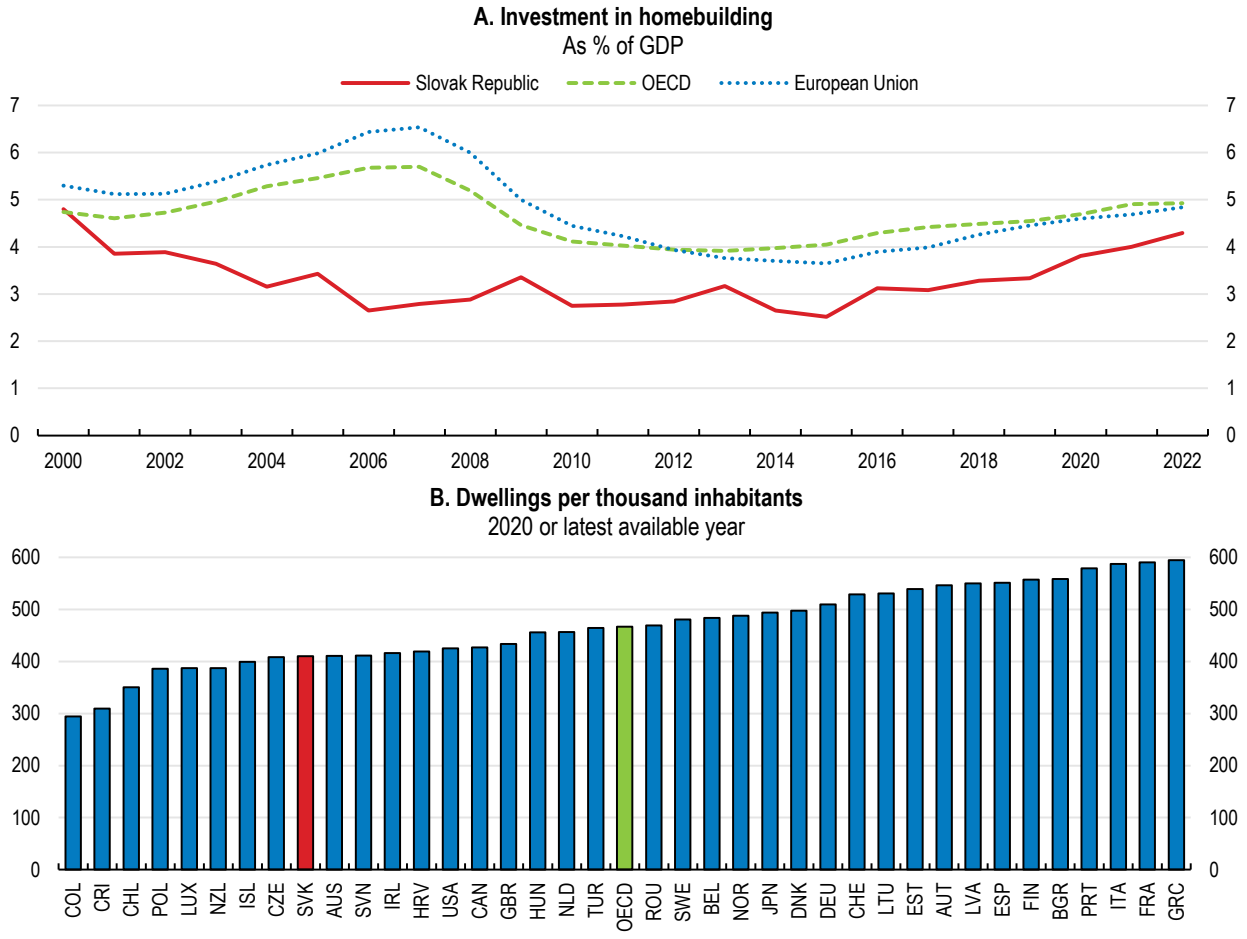
Figure 2.8. Housing demand pressures have been strong



Source: OECD National Accounts database; OECD Economic Outlook: Statistics and Projections database; and OECD Affordable Housing database.

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Figure 2.9. Housing supply is low



Note: Data refers to the European Union including 27 countries. Unweighted averages for OECD and European Union aggregates.
Source: OECD Economic Outlook: Statistics and Projections database; Eurostat National Accounts database; OECD Affordable Housing database; Slovak Republic's Population and Housing Census 2021; OECD calculations.

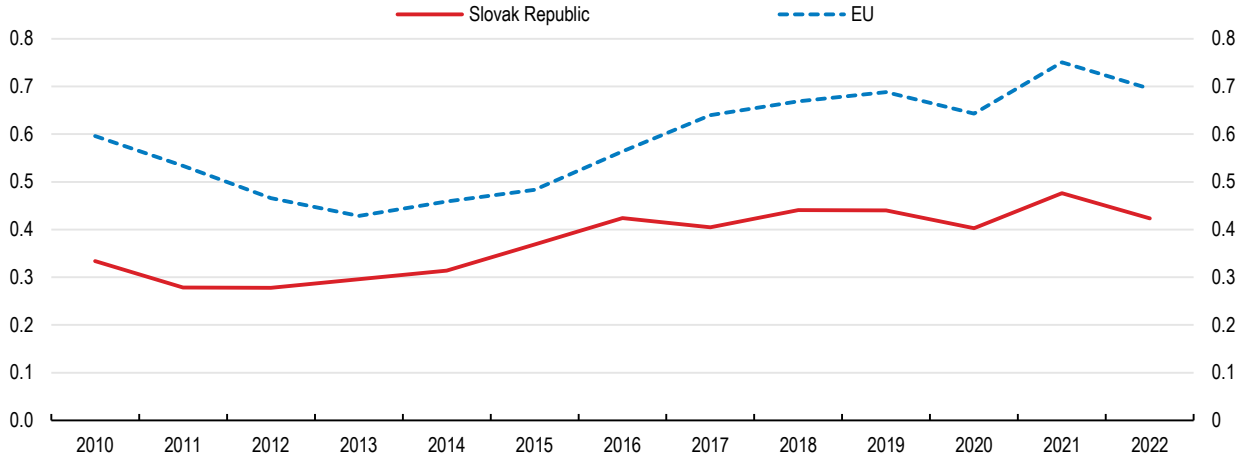
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Streamlining land use policy and building permit procedures to enhance supply responsiveness

There are inefficiencies in the administration of construction activities. The process for obtaining building permits is too long. It takes on average 300 days to issue a construction permit, versus 152 days in the average OECD country (World Bank, 2019[15]). The number of residential constructions permits per capita has been persistently lower than in other EU countries (Figure 2.10). Inefficiencies in the administration of construction activities can be attributed both to the organisation of land use policy and to lack of digitalisation in the building permit procedures.

Figure 2.10. Per capita residential construction permits lag behind other EU countries

Construction permits for residential buildings, square metres per inhabitant



Note: Unweighted average for the EU.
Source: Eurostat Building permits database.

StatLink https://stat.link/pfjt6b

Reducing administrative fragmentation to pool resources and facilitate constructions

Land use policy is currently highly decentralised, and the devolution of building competences to local governments has not been accompanied by adequate capacity reinforcement. The decentralisation of public administration, which started in 1990, shifted the responsibility for construction-related activities, including the authority to grant building permits, to municipalities. However, municipalities often face significant challenges in executing these tasks due to limited financial and human resources. By law, municipalities receive designated transfers from the central government to fund the administration of construction activities. Nevertheless, these transfers often fall short of needs, especially for smaller municipalities, as they are solely tied to population size and do not consider the fixed costs associated with such activities (Supreme Audit Office, 2022[16]). This is particularly problematic as Slovakia has one of the most fragmented local government systems in the OECD (with an average population of 1 863 inhabitants per municipality, compared with an OECD average of 10 254, and 2/3 of municipalities having less than 1 000 inhabitants). Consequently, a large share (58%) of actual expenditure for construction-related activities is covered by municipalities through their own resources (Supreme Audit Office, 2020[17]; Supreme Audit Office, 2022[16]). Local revenue autonomy is however limited, as recurrent taxes on residential property - a primary source of income for local authorities - are very low (see below).

High administrative fragmentation and inadequate financial resources translate into difficulties to hire qualified staff at the municipal level. This is particularly problematic in the area of construction planning and permitting. Construction-related activities require highly specialised workers and continuous training. Finding and attracting high-skilled workers is in general difficult for a municipality as it cannot afford to pay competitive wages (MoF and University of Economics of Bratislava, 2017[18]). As a consequence, qualification requirements for professionals approving building plans (three years of experience and a qualification exam) are lower than in most other OECD countries, where a university degree in engineering or architecture is needed (World Bank, 2018[19]). Moreover, training of staff in charge of the building procedures is provided on an irregular basis and attendance is limited (Supreme Audit Office, 2022[16]).

Decentralisation and fragmentation of land use planning and construction administration can also result in delays or refusal of construction projects due to resistance of local communities (OECD, 2021[6]). This risk is particularly pronounced at lower levels of government, where policy capture by local stakeholders is more of a concern. Local stakeholders can exert pressure on local politicians to advocate for restrictions

that protect or enhance the value of their homes. Indeed, the Supreme Audit Office has documented several cases of obstructions and violation of the law by local building authorities related to the issuance of building permits to accommodate local stakeholders (Supreme Audit Office, 2022[16]).

Efforts are underway to address the challenges arising from the decentralised and fragmented administration of residential development activities. The authorities have announced plans to re-centralise decision-making power for residential development activities starting from April 2025. This will be accomplished through the establishment of a new central authority dedicated to spatial planning and constructions. The new office will also provide assistance and a common methodology for preparing spatial plans to each municipality and regional authority, which is currently not in place.

The authorities should carefully consider the trade-off between gaining efficiency by re-centralising residential development activities and potentially losing proximity to citizens. On the one hand, centralised land use policy would ensure an appropriate distance to mitigate pressures from local stakeholders, reducing barriers to construction and improving the alignment of supply and demand (OECD, 2021[6]). Furthermore, transferring responsibilities from the municipalities to a higher level of government can free up resources for better training of officials and attract highly skilled technical personnel essential for tasks like spatial planning and construction procedures through higher wages. On the other hand, highly centralised land use policy could, if improperly implemented, impose overly rigid procedures (for example to modify spatial plans), which could hamper the ability to quickly adapt to the evolving needs of the local housing market (Mualam, 2018[20]).

In re-centralising competences in land use policy, the authorities should foster consultation with the local administration to ensure an adequate level of information about local housing market conditions. While doing so, it is essential to avoid overlapping competences across government levels, as this could lead to each group having veto power, causing further delays or undue rejections of construction projects (Cavalleri, Cournède and Özsöğüt, 2019[21]).

Furthermore, the authorities should clarify responsibilities and promote close coordination among various actors with overlapping or complementary competences in housing policy at the central level, i.e., the Ministry of Transport, the Ministry of Environment and from 2025 the new authority for spatial planning and construction. Lack of coordination can result in inefficiencies, duplication of efforts, and conflicting policies or regulations that can limit the effectiveness of national housing policies (OECD, 2021[6])**.** In Israel, the Housing Headquarters is a successful model of coordinating various government housing agencies. Created in response to a housing crisis in 2015, this committee has effectively brought together relevant authorities, and led to smoother collaboration and quicker planning and construction timelines (OECD, 2021[6]; OECD, 2017[22]).

In light of the high administrative fragmentation, the authorities could also consider merging small municipalities, or making inter-municipal co-operation compulsory for competences that remain under the responsibility of the local government, such as spatial planning. Mandatory mergers of municipalities, as in Denmark, Greece, Japan, and New Zealand, are effective in reducing administrative fragmentation, but can be politically challenging (OECD, 2020[23]). Currently in Slovakia, municipalities that face a high administrative burden in the area of land use policy and construction activities can coordinate and delegate construction-related activities to a Joint Building Office (JBOs) on a voluntary basis. Such cooperation is however not systematically supported by the state, neither financially nor methodologically. Most local representatives are therefore reluctant to delegate competences to JBOs (Klimovský et al., 2014[24]; Sloboda et al., 2020[25]).

The authorities should strengthen intermunicipal cooperation and allocate adequate resources to the JBOs (via transfers or revenue autonomy). For example, in France, a country with a highly fragmented local administration, intermunicipal cooperation on some competences, including spatial planning, was made mandatory in 2017. Strengthening cooperation across municipalities over competences in land use policy could optimise resources through the transfer of competences to such higher levels of government.

Moreover, inter-communal spatial plans, that include several municipalities, can be more effective in assigning housing and infrastructure where it is most needed and help better plan the expansion of public services (OECD, 2017[26]).

Accelerating efforts to digitalise and increase the transparency of permitting procedures

Cumbersome procedures and limited digital adoption slow the administrative process for residential development. Obtaining building permits involves numerous steps and multiple stakeholders. This results in a larger number of documents that need approval compared to peer OECD countries in central and eastern Europe, with the exception of Czechia (Table 2.1). Construction reforms have been implemented in some other central and eastern European countries, resulting in substantial simplification and acceleration of building permits procedures. Reforms in Poland and Latvia, for example, have led to the removal of certain documentation requirements previously necessary for building permit applications (e.g., inspections from the Public Health Agency, geotechnical documentation of the land) (World Bank, 2016[27]; World Bank, 2019[28]).

Furthermore, Slovakia lacks a centralised one-stop shop for gathering and filing all the necessary information related to building permits, despite the availability of an online list of required documents (Table 2.1). Zoning plan documentation is often not available online, and when it is, it is rarely in a format that enables further processing of the data or automated evaluations. Moreover, there is no digital service which allows communication between building administrations and applicants to track progress during the process. This implies that investors need to engage with the administration via standard mail service or face to face, which significantly slows down the process (ECSO, 2018[29]).

Ownership fragmentation and an outdated registration system hinder residential investment. The ownership registration system in many cases does not allow the identification of all owners, and data is not easily readable, as information is mostly recorded in paper format. This is particularly problematic due to the high fragmentation of ownership resulting from inheritance laws and the property restitution process after the communist period, which makes it particularly challenging to identify and track all owners (Muchová and Raškovič, 2020[30]). The combination of ownership fragmentation and issues in the registration system contribute to high uncertainty around property rights, which hinders investment in property development, as well as infrastructure. Investors need to undergo complicated, time-consuming, and legally expensive processes to establish property rights.

General courts as opposed to specialised courts handle objections related to building permits. Handling of litigation by general courts is associated with longer trial duration, lengthening the building permit procedure (Palumbo et al., 2013[31]).

Table 2.1. There is room to simplify the building permit procedure

Characteristics of the building permit for residential unit procedure in the Slovak Republic and selected OECD countries

Selected questions in QuASH 2021	**Slovak Republic**	Czechia	Hungary	Poland	Estonia	Latvia	Lithuania
Number of steps in the procedure	**5**	6	4	3	2	2	7
Number of documents needed for approval	**23 minimum**	39	6	4	3	3	4
List of pre-required documents available online	**Yes**	No	Yes	Yes	Yes	Yes	Yes
Existence of one-stop shop to file for the permit	**No**	No	Yes	No	Yes	Yes	Yes
Objections to building permit requests handled by specialised courts	**No**	Yes	Yes	Yes	Yes	No	No

Source: OECD Questionnaire on Affordable and Social Housing (QuASH) (2021)

There are plans to fully digitalise information related to construction and building permits only by 2032. While this is a welcome step, it is important to expedite the process and pay special attention to the implementation phase. In fact, efforts to increase digitalisation in construction-related procedures have been a long-standing goal, driven by directives from the European Commission. However, implementation has been hindered by the absence of legal obligations and high estimated costs (Supreme Audit Office, 2022[16]). In digitalising building permit procedures, the authorities could follow successful examples from other countries, such as Croatia and Estonia (Box 2.1). Both countries have introduced digital platforms that enable online applications for building permission and facilitate communication between building administrations and applicants to track progress. These platforms serve as a comprehensive one-stop shop, providing easy access to all relevant documents. They enable the use of machine-readable documents and facilitate the full utilisation of construction-related data, effectively reducing paperwork and enhancing transparency, leading to a substantial increase in administrative efficiency and savings in costs. Moreover, the transition to a fully digital land registry and cadastre lays the ground for legal certainty by improving the transparency of property rights.

The lack of enforceable statutory deadlines in the building permit process contributes to high uncertainty for investors, perceived corruption, and unauthorised constructions. Currently, the administration has non-enforceable timeframes to respond to applicants at each stage of the permit process. This contributes to prolonged waiting times and a lack of certainty for investors, creating incentives for corruption. Individuals may rely on personal connections or even resort to making unofficial payments to officials in order to obtain or expedite permissions (Eurobarometer: Corruption, 2022[32]). Furthermore, this also results in applicants building unauthorised structures, in absence of severe sanctions. These constructions often lack proper quality standards, posing potential safety risks to the public and the environment (ECSO, 2018[29]).

To reduce perceived corruption, limit the practice of unauthorised buildings and speed up construction projects, the authorities could also consider introducing national statutory deadlines in the building permits procedure. Following these deadlines, applicants could automatically receive project approval, unless specific circumstances arise, such as the presence of historical monuments or natural reserves, as is the case in France. Alternatively, the decision could be referred to a higher instance, akin to the administrative procedures in Austria, Portugal, and Slovenia (Costa Branco, Meijer and Visscher, 2011[33]). This provides a strong incentive for building authorities to respond in time but should be coupled with efforts to improve the efficiency of administrative procedures for construction, as mentioned above. The regulation should also involve stricter enforceable sanctions for non-compliance with the rules.

Box 2.1. Digitalisation of building permits in Croatia and Estonia

The "eDozvola" system in Croatia

Croatia has taken significant steps to digitalise the building permit process. In 2014 the Ministry of Physical Planning, Construction, and State Property launched the "*eDozvola*" platform, a centralised information system which allows for electronic submission of applications for construction permits, along with real-time updates on application status. Applicants can provide all required information, attachments and projects through the public portal during the application process. The system ensures consistent document processing throughout the country, enabling faster administrative processes and maintaining a digital archive of application-related attachments. This made the issuance of building permits more transparent and allowed to reduce the number of days needed to obtain building permits from 188 in 2014 to 126 in 2018, benefiting both the public sector and applicants.

The "Ehitisregister" in Estonia

Estonia is at the forefront of digital public services adoption in the European Union (European Commission, 2022[34]). As part of comprehensive e-government services, and in line with the e- Europe strategy, Estonian authorities have developed a digital e-construction platform (*Ehitisregister*) that has been in place since 2015. This platform enables individuals and businesses to apply for building permits and submit the required documentation electronically. Applicants can also track the progress of their permit applications online and receive notifications and updates. The system is linked to a digital building logbook which contains all relevant data related to each phase of the building lifecycle (i.e., design, construction, maintenance, renovation, demolition), allowing to track the history and requirements of the building and ensuring that operational procedures are followed correctly.

The digitalisation of building permits has led to reduced paperwork, improved transparency, reduced uncertainty for investors, and better coordination among stakeholders in the permitting process. This allows fast processing times. Indeed, in 2019 obtaining a building permit took approximately 100 days, compared to an average of 152 days in other OECD countries (World Bank, 2019[15]).

Supported by the European Union, in 2019 Estonia took another significant step achieving full digitalisation of the procedure by starting to integrate the e-construction platform with a 3D model-based process known as building information modelling (BIM). Compared to standard 2D models (PDFs), 3D models facilitate the generation of detailed and precise construction documentation, including drawings, schedules, and quantities. By enabling the administration to visualize the design of the project and identify potential issues, this technology significantly reduces errors during the technical inspection of building design documentation (compliance with zoning plans, laws, and regulations), leading to a substantial increase in administrative efficiency. A cost-benefit analysis revealed savings of more than EUR 500 000 per year and an increase of workload efficiency by about 8-10% associated with the introduction of a fully digital building permit system in Estonia (ECSO, 2021[35]).

Source: (ECSO, 2021[35]), https://www.mkm.ee/en/construction-and-residential-sector/construction/building-register;

Reforming the regulation of tenant-landlord relations to facilitate the development of the private rental market

The Slovak formal private rental market is one of the smallest in the OECD. Following the extensive privatisation of state-owned housing in the early 1990s, only 6.8% of the population lives in a privately rented flat, well below the 16.8% OECD average (OECD, 2020[2]). Anecdotal evidence points at the existence of a non-negligible informal private rental market which, aside from the losses in tax revenues due to the lack of declared rental incomes, limits the protections and security of both property owners and

tenants. Official estimates of the size of the shadow rental market are missing. However, the Ministry of Transport estimates the size of the informal rental market to be at least 3% of the housing stock overall.

Expanding the formal rental market has been recommended in past OECD Surveys (OECD, 2014[36]; OECD, 2017[37]). A well-developed formal rental market can improve housing affordability by providing an alternative to homeownership, especially for those households, such as the young, who may face challenges in accumulating down-payments and establishing strong credit scores required for a mortgage. A well-functioning rental market can also encourage residential mobility, which is closely linked to job mobility, and can therefore boost efficient job and skill matching and productivity while reducing regional disparities (see *Chapter 1*). Public policies can play an important role in incentivising the development of a formal private rental market. For example, changes in the regulation aimed at striking a better balance between the protection of homeowners and tenants, in combination with a tax reform that ensures more balanced taxation of owner-occupied and properties to rent (see below), have the potential to make the rental market more attractive for both tenants and landlords and to bring the informal market out of the shadows.

In Slovakia, rental regulation does not strike an appropriate balance between the protection of landlords and tenants. There are no controls on rent levels, and the extent and frequency of rent increases need to be specified in the rental agreement. Together with Lithuania – a country with an even smaller rental market – Slovakia is one of the few OECD countries where lease agreements can be signed for an indefinite period and automatically passed on to family members. Furthermore, rental contracts cannot be terminated in certain circumstances (i.e., the tenant is in material need), unless the landlord provides alternative accommodation to the tenant upon ending the lease. While restrictions to contract termination are not unusual in OECD countries, especially in central-eastern Europe, the combination with indefinite contracts which can be passed on to family members makes the regulation of tenant-landlord relations more unbalanced towards the protection of tenants (Table 2.2). Moreover, disputes related to rental agreements often take a long time to settle, averaging around 26 months between 2018 and 2022. This extended timeframe enables tenants to continue residing in the properties throughout the dispute resolution process. This creates a deterrent for landlords, undermining investment in the rental market (MoF, 2019[38]).

Making the regulation of tenant-landlord relations more balanced has been a long-term objective of the authorities. It was one of the key priorities of past State Housing Policy plans and it is one main objective in the latest state housing strategy (Ministry of Transport and Construction, 2020[12]). The introduction of the 'Short-Term Rental Act' in 2014 aimed to address this issue by implementing a separate legislation for fixed-term rental contracts, which can be applied at the discretion of the parties. The Short-Term Rental Act imposes a duration of rental contracts of maximum two years, with only two permitted renewals for a further fixed term not exceeding two years. It envisages more flexible rules to terminate the lease via shortening the notice period to a minimum of 15 days to 30 days in some circumstances (Table 2.2) as opposed to three months, eliminating the obligation to find replacement housing for evicted tenants and the obligation to pass the tenancy to the heirs. It also introduces the obligation for the tenants to pay a maximum three-months security deposit (absent in indefinite contracts).

While some of these measures represent positive steps for incentivising investment in rental housing, others can have negative unintended consequences. Indefinite contracts have become rare given the level of tenant protection they afford, and most new contracts are subject to the Short-Term Act. This has created a dual rental market, where few tenants are excessively protected while many others experience instability. For example, the 15 to 30 days' notice period in case of termination of the lease agreement by landlords is the shortest among OECD countries (Table 2.2) and raises the risks of evictions, which in turn can raise the likelihood of a range of life adversities for tenants, including homelessness (Kenna et al., 2016[39]; OECD, 2021[6]).

The authorities should rebalance the rights of landlords and tenants in rental contracts. Specifically, the government should make provision for a rental contract that includes a fixed duration but can be renewed an unlimited number of times; introduces the obligation for tenants to pay a security deposit; specifies reasons to evict the tenant with adequate notice period (e.g., three months as in most OECD countries); and does not include the obligation for landlords to find replacement housing for evicted tenants and to pass the tenancy to the heirs. In parallel, the maximum duration of short-term rental contracts should be reduced, in line with some other OECD countries (e.g., Austria, France, Ireland, Italy, Norway, Slovenia), to avoid incentivising their use for medium and long-term purposes.

Some efforts have also been made to incentivise the formalisation of rental contracts. Indefinite rental contracts do not require any registration for the validity of the lease agreement. In contrast, upon signing a short-term rental contract, the landlord has the legal obligation to officially register the contract with the tax authority; however, the lack of control from the Financial Administration has hindered enforcement. Efforts to rebalance taxation between owner-occupied and rental housing as suggested below could further help incentivise the formalisation of rental contracts. Additionally, the authorities could consider providing more incentives to landlords and tenants to formally register rental contracts in a rental registry, as for example was done in Latvia in 2021. The Latvian reform expedites termination of registered rental contracts for landlords while enhancing security for tenants (Box 2.2) (OECD, 2020[40]; Ūdris, 2022[41]; OECD, 2023[42]). The Latvian reform also effectively reduced the administrative burden associated with registration by enabling online registration without the need for a notary visit and allowing electronic signatures of contracts. A similar reform would not only benefit both tenants and landlords, as it would enable to enforce their rights but would also provide reliable public information on rental transactions and tackle tax evasion in the rental market.

Box 2.2. Reform to rebalance tenant-landlord relations and incentivise formalisation of the private rental market in Latvia

In 2021, the Latvian Ministry of Economy implemented a new legal framework for residential tenancy with two primary objectives.

First, the law aims to strike a better balance between the rights of landlords and tenants in the private rental market. This is achieved by: i) eliminating the previous practice of indefinite lease agreements; ii) facilitating the tenants ability to terminate the contract and clarifying specific conditions under which a landlord can terminate the lease; iii) eliminating the rights of family members to automatically take over a lease agreement (except in the case of the tenant's death); iv) expediting the dispute resolution process for terminating tenancy contracts in certain circumstances (non-payment of rent and utility for more than 2 months for registered contracts); v) stipulating the conditions under which a landlord may increase the rent.

Second, it incentivises property owners to officially register their rental properties in a newly established rental registry. By registering, tenants of these properties receive enhanced security, such as the ability for their contracts to remain valid even if the property ownership changes, which was not possible in Latvia before the reform. This provides an incentive for tenants to agree to the registration. Furthermore, the expedited dispute resolution process for terminating tenancy contracts is applicable only to registered contracts, which serves as an incentive for landlords. The primary goals of the registry are to improve transparency, establish the legally binding nature of agreements for renters, and streamline the dispute resolution process. Additionally, the registry makes available reliable public information on rental transactions, which ultimately safeguards the interests of both landlords and tenants.

Source: (OECD, 2020[40]; Ūdris, 2022[41]; OECD, 2023[42])

Table 2.2. Regulation of tenant-landlord relations in selected OECD countries

	Size of the private rental market (as % of the housing stock)	Typical minimum rental contract duration	Reasons for the landlord to terminate the rental contract	Restrictions to terminate rental contract	Legally required notice period for the landlord to terminate the rental contract	Deposit requirement (in equivalent of monthly rent)
Australia	32.1	No minimum duration – negotiable between landlord and tenants	Varies by province, but in general: failure to pay rent; renovation of the dwelling; occupation by the landlord; sale of the dwelling	No	Varies by state, by reason for termination and by type of tenancy (2 months in standard contracts)	Varies by state/territory
Canada	30.8	In most provinces, landlords and tenants are not required to sign a formal lease and many rental contracts are month to month	Varies by province, but in general: failure to pay rent; renovation of the dwelling; occupation by the landlord; sale of the dwelling	No	Varies by province, by reason for termination (minimum 7 days, maximum 120 in Ontario)	1 month
Czechia	17.8	12 months	Varies by province, but in general: failure to pay rent; occupation by the landlord	No	3 months	Maximum 6 months
Estonia	5.7	Contracts for a short, specified period are most common	Failure to pay rent	No, but a court may suspend or defer enforcement proceedings if it is unfair to the debtor, e.g. based on family and economic situation of the debtor	3 months	Maximum 3 months, usually 1 to 2 months
Finland	18.2	12 months	Failure to pay rent; renovation of the dwelling; occupation by the landlord; sale of the dwelling	No	3 months	1 to 3 months
Hungary	4.5	12 months	Failure to pay rent	Winter time, presence of children, long term illness of tenant can lead to suspension of eviction procedure	1.5 months	Maximum 3 months
Latvia	7.2	A reform was introduced in 2021 to eliminate indefinite lease agreements	Failure to pay rent; renovation of the dwelling	Presence of children, people with disabilities	1 month	No limit
Lithuania	0.8	Indeterminate or fixed term	Failure to pay rent	Winter time, presence of children, people with disabilities	6 months	1 to 3 months
Poland	4.0	6-12 months	Failure to pay rent;	Winter time,	1 month	6-12 months

			renovation of the dwelling; occupation by the landlord	presence of children, people with disabilities		
Slovakia	**6.8**	**A contract of lease of a dwelling may be formed for an indeterminate term. A short-term contract can be signed for a maximum 2-years period (renewable twice)**	**In indefinite contracts: failure to pay rent; renovation of the dwelling; occupation by the landlord; sale of the dwelling; the tenant damages the dwelling. In short-term contracts: failure to pay rent; the tenant damages the dwelling or uses of the dwelling for different purposes; other reasons specified in the contract**	**In indefinite contracts: presence of children, people with disabilities and people in material need. The landlord needs to provide an alternative accommodation solution to the tenants if s/he wants to terminate the rental contract. In short-term contracts: no restrictions specified in the Act**	**In indefinite rental contract: 3 months. In short-term contracts: 2 weeks to 1 month. The 2-weeks' notice applies in case the tenant damages the dwelling or did not pay rent in time for more than 2 months**	**In indefinite rental contracts: no requirement. In short-term contracts: maximum 3 months**
Switzerland	55.5	12 months	Failure to pay rent; renovation of the dwelling only in case this creates significant delays or costs; occupation by the landlord	Winter time	3 months	3 months
United States	32.7	12 months	Varies by state, but in general: failure to pay rent; renovation of the dwelling; occupation by the landlord; sale of the dwelling	No	Varies by state (minimum 1 month)	Varies by state, but usually 1 to 2 months

Source: OECD Questionnaire on Affordable and Social Housing (QuASH) (2021)

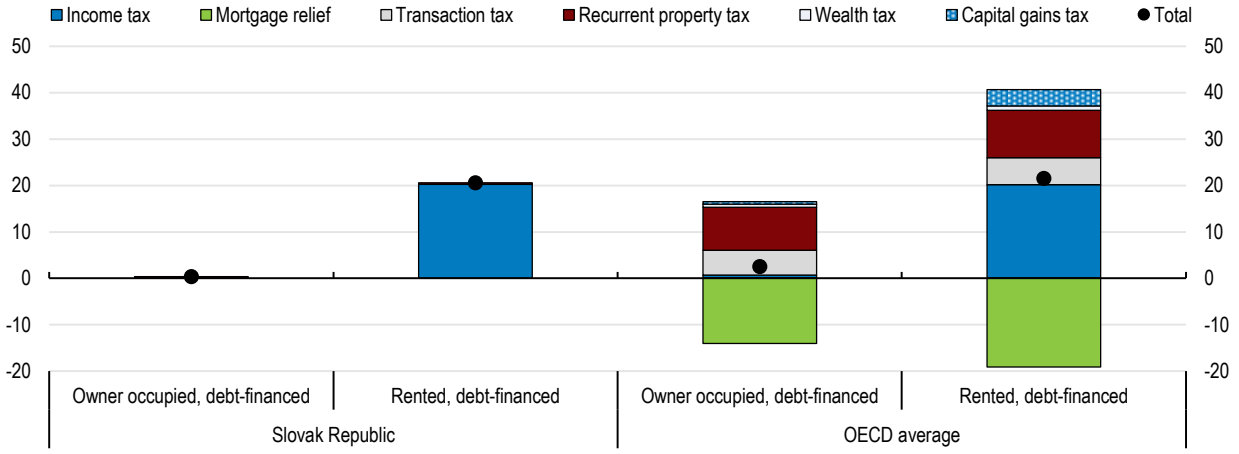
Reforming housing taxation to reduce pressure on demand for owner-occupied housing and improve affordability

Reducing the tax bias in favour of owner-occupied housing

As in many OECD countries, the tax treatment in Slovakia favours owner-occupied housing over renting. The marginal effective tax rate (METR) on owner-occupied property in Slovakia is much lower compared to rented residential property (Figure 2.11). In line with other OECD countries, the difference in METR between owner-occupied housing and rental housing can be attributed mainly to the non-taxation of imputed rents, in contrast to the taxation of rental income through personal income tax. In addition, since 2018 mortgage interest expenses on owner-occupied housing are tax deductible for young households (between 18 and 35), in contrast to rental housing for which such deductions are not available. However, the deduction is capped at EUR 400 yearly. Tax settings that promote owner-occupied housing are common in OECD countries (OECD, 2022[43]). In general, they are justified by claims that they promote household financial security and stability or produce social benefits through increased community attachment (OECD, 2022[44]). However, favourable tax treatment to owner-occupied housing, especially in the presence of supply rigidities, translates into higher demand pressures and higher house prices, ultimately making housing less affordable (Fatica and Prammer, 2017[45]; OECD, 2021[6]; Remeta et al., 2015[46]).

Figure 2.11. Taxes are lower for owner occupied property

Marginal effective tax rates, debt-financed housing, %, 2016



Source: Millar-Powell, B., et al. (2022), "Measuring effective taxation of housing: Building the foundations for policy reform", OECD Taxation Working Papers, No. 56, OECD Publishing, Paris, https://doi.org/10.1787/0a7e36f2-en.

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Gradually phasing out mortgage interest relief would help rebalance the tax treatment between owner-occupied and rental property. In absence of taxation on income generated by owner occupied housing (imputed rents) the justification for allowing deduction of costs, including mortgage interest payments, is limited as there is no corresponding taxable income (OECD, 2022[43]). In addition, mortgage interest relief on owner-occupied housing is capitalised into house prices leading to higher prices, especially when supply is inelastic (Sommer and Sullivan, 2018[47]; Gruber, Jensen and Kleven, 2021[48]). Moreover, it increases households' indebtedness with potential effects on macroeconomic stability (Sommer and Sullivan, 2018[47]). Empirical evidence from Denmark shows that scaling back mortgage interest rate relief can substantially reduce equilibrium house prices and household indebtedness (Gruber, Jensen and Kleven, 2021[48]). However, mortgage interest relief should be phased out gradually to mitigate adverse impacts on households that would have otherwise benefitted from the tax advantage, over the adjustment period (OECD, 2021[6]).

The authorities should also consider easing expensing rules related to rental residential investment. Currently, private landlords (as opposed to business investors) can only deduct direct operational expenditures incurred via rental activity, such as electricity, gas, water supplies and sewerage costs from rental revenues for tax purposes. This is different from most OECD countries, where private landlords can also deduct mortgage interest expenses and maintenance costs (OECD, 2022[43]). Expanding eligible expenses for private landlords would create a more favourable environment for rental activities, especially in a context of high price to rent ratios. However, this would create additional complexity for the administration that would need to verify that the declared costs are maintenance costs and not costs incurred to improve the property. The latter represents an investment and therefore should not be deductible.

Phasing out tax exemptions on capital gains from the sale of the property would further reduce the bias towards homeownership and increase equity. Capital gains on the sale of the property are tax exempted after five years of ownership, adding to the tax bias in favour of homeownership (Remeta et al., 2015[46]). Such exemptions are generally justified by protecting people's savings for retirement and to avoid lock-in effects, i.e., households staying in the property to avoid paying the tax. Potential lock-in effects could be mitigated by basing the recurrent property taxes on values as suggested below, which would limit incentives for households to remain in undervalued homes, and by taxing capital gains only at a low rate. In addition, the tax exemption of capital gains on owner-occupied property exacerbates regional

inequalities by favouring households in large metropolitan areas, where property prices experience substantial growth on already highly valued properties. To support most vulnerable households, capital gains taxes could be exempted only for the main residence below a certain threshold, as is done for example in Israel, Korea, Mexico and the United States (OECD, 2022[43]). However, capital gains on multiple homes should not be exempted to promote neutrality across different asset classes and increase the fairness of the tax system, as owners of second homes have generally higher income and wealth. This could however contribute to the bias in favour of owner-occupied housing (Remeta et al., 2015[46]).

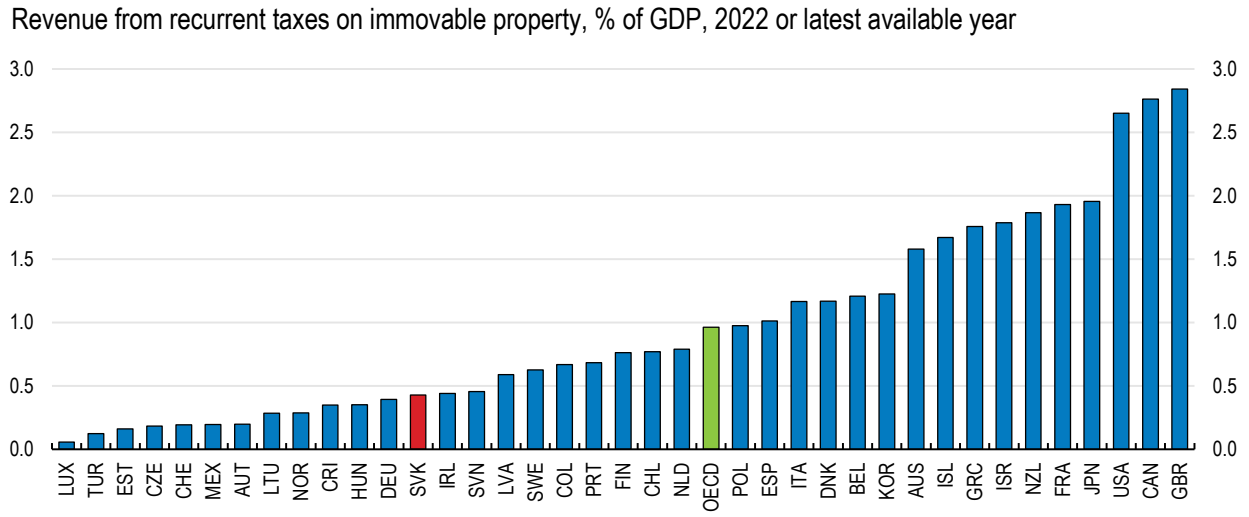
Tax exemptions for private investors to provide rental housing at below-market prices should also be avoided. In 2022, the authorities introduced VAT reductions (from 20% to 5%) for private investors financing the provision (construction or acquisition) of rental housing targeted at middle- and low-income households. Tax incentives for the provision of rental housing with rents below market price are common in other OECD countries. For example, tax reductions are provided to developers in Chile, Colombia, Germany, Türkiye, Portugal, Spain, and the United States, or directly to homeowners in Australia, Canada, and France. However, evidence about the effectiveness of these programmes is scant and mixed. Evaluations of the Low-Income Housing Tax Credit in the US indicate that it has effectively expanded the share of affordable housing within the housing stock. However, they also show a substantial crowding-out of housing investment by other non-subsidised investors, which reduces the effectiveness of such programs in bolstering the overall housing supply and affordability (Malpezzi and Vandell, 2002[49]; Eriksen and Rosenthal, 2010[50]; Baum-Snow and Marion, 2009[51]). Additionally, in France, studies show that for every EUR 10 spent on the *Pinel* tax incentive scheme, renters benefited from a EUR 1 reduction to their rent. Though this was partly attributed to the design of the provisions, which established a maximum rent per square meter at the regional level, overlooking the variations within the regional housing markets. Moreover, given low profitability of rental housing projects with below-market prices, private investors may locate developments in areas where demand and costs are low, creating concentration of low-cost housing, and increasing segregation (Deniau and Krieff, 2019[52]; OECD, 2022[43]; OECD, 2023[42]). Therefore, if such policy is maintained, it should be closely monitored and evaluated.

Reforming recurrent immovable property taxes to raise efficiency and equity

Revenues from recurrent taxes on immovable property are low: they only represent 0.5% of GDP and 1% percent of total tax revenues, much lower shares than in other OECD countries (Figure 2.12). Recurrent taxes on residential property are considered more economically efficient than many other taxes and have empirically been found to be comparatively less harmful to economic growth (Akgun, Cournède and Fournier, 2017[53]; Cournède, Fournier and Hoeller, 2018[54]). Moreover, they can help stabilise fluctuations in the housing market and slow down house price increases as they get capitalised into house prices over time (Cournède, Sakha and Ziemann, 2019[55]). Finally, higher recurrent taxes on immovable property, by raising costs, can serve as a deterrent for excessive ownership fragmentation (see above). This may incentivise the sale of the property or, should the law make such provisions, lead to the appropriation of the property by the municipality or the State if property taxes remain unpaid for some time, as it is for example the case in France.

Increasing revenues from recurrent taxes on immovable property would create room to lower more distortive taxes. As previous Surveys and OECD work have argued (Remeta et al., 2015[46]; OECD, 2022[56]), Slovakia could benefit from a reform shifting some of the tax burden from less economically efficient taxes, such as taxes on labour income and social security contributions which are especially high, toward recurrent taxes on residential property (see *Chapter 1*).

Figure 2.12. Revenues from recurrent taxes on immovable property are low



Note: OECD unweighted average.
Source: OECD Revenue Statistics database.

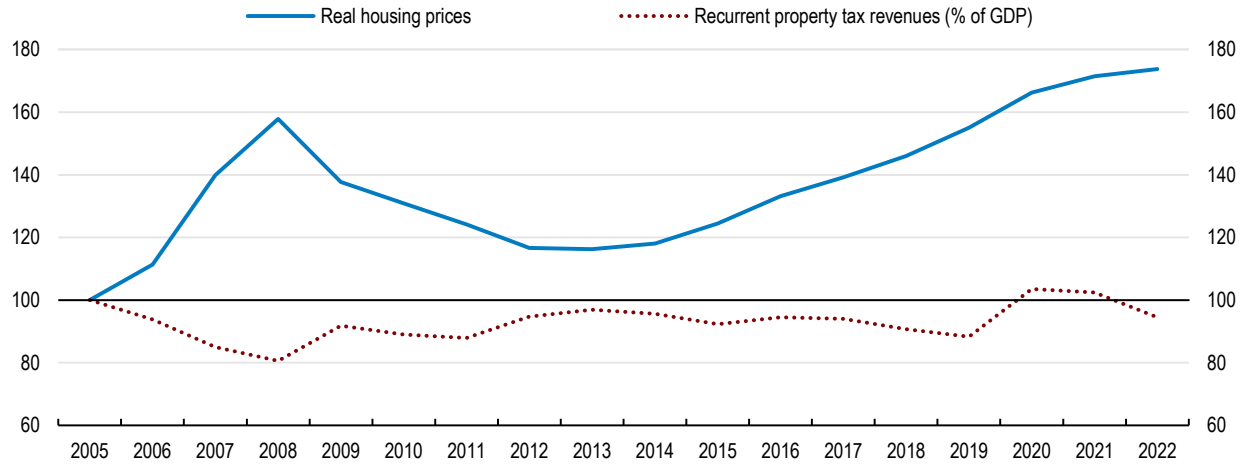
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Moreover, the design of the recurrent residential property tax is harming equity and efficiency. Slovakia is one of very few OECD countries (together with Czechia, Israel and Poland) that bases recurrent taxes on immovable property on the area of the property rather than its estimated market value. A system based on the property area is less accurate in accounting for taxpayers' housing wealth, as it disregards other physical characteristics of the property which are key determinants of its value, such as type, quality, number of rooms, age, presence of a garden or a balcony. Additionally, in an area-based property tax system, tax revenues are not responsive to changes in the housing cycle. This limits its effectiveness as a stabiliser of fluctuations in the housing market and reduces long-term sustainability of fiscal policy. In fact, recurrent property tax revenues have remained relatively stable over time, despite increasing house prices (Figure 2.13).

The recurrent residential property tax should be based on regularly updated market values. Taxing properties based on outdated values can make the tax regressive as houses that experience large increases in market values become relatively under-appraised and under-taxed, especially in the absence of capital gains taxes on housing. Moreover, homeowners would have an incentive to remain in undervalued homes, thereby further reducing residential and labour mobility (OECD, 2022[43]).

Figure 2.13. Revenues from recurrent property taxes have not kept up with the increases in house prices

Index, 2005 = 100



Note: The property tax indicator refers to all recurrent property taxes collected and not just those levied on household assets.
Source: OECD Price Statistics database; and OECD Revenue Statistics database

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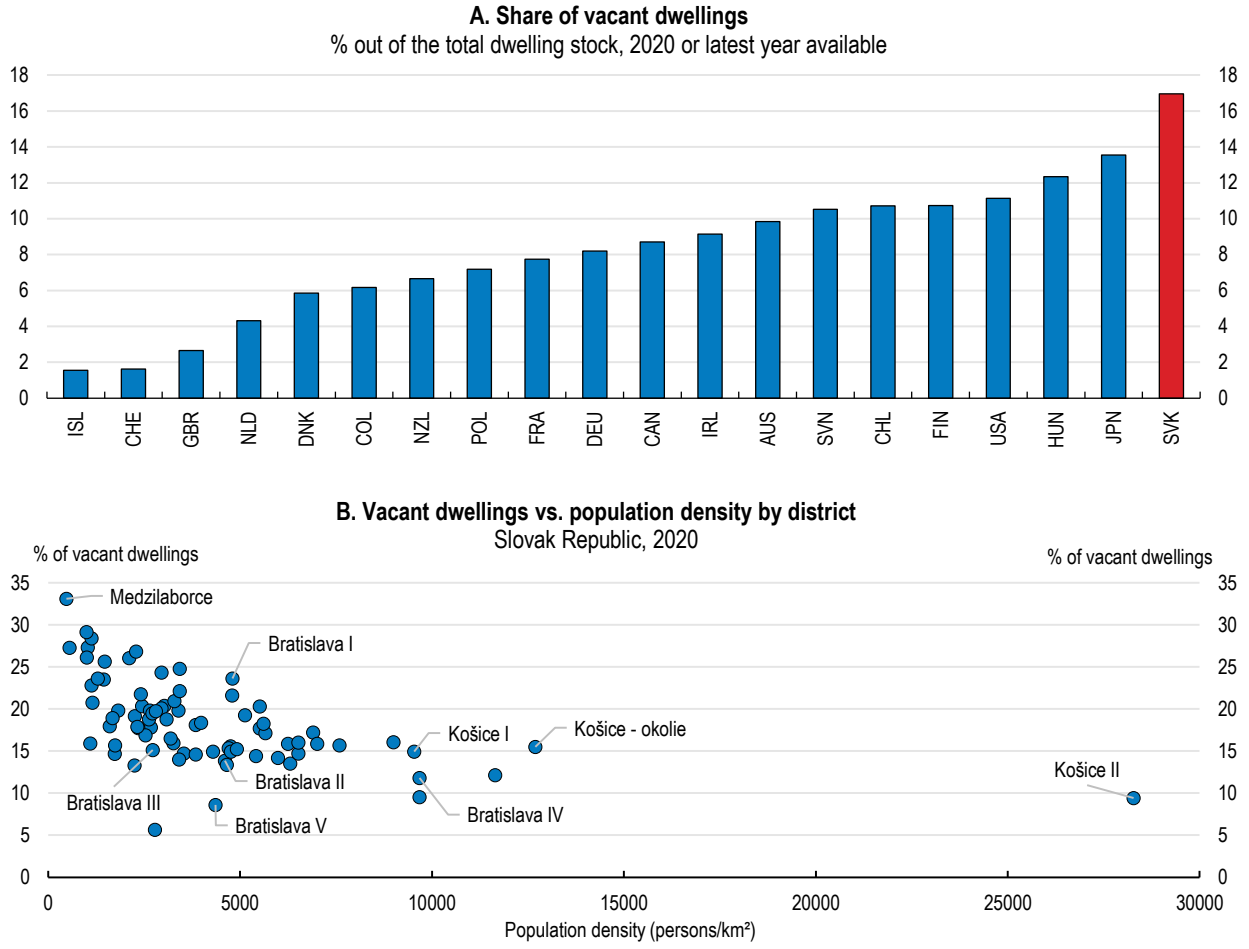
Regularly updating the value of residential properties can be administratively costly, but digitalisation can limit the burden on the administration. The most common method for property evaluation in OECD countries is based on sales comparisons, which use detailed data on recent sales for properties with similar characteristics, adjusting for property differences (e.g., age, quality, location, size, property type, etc.). As this method heavily relies on the availability of data, it requires an upfront investment to improve land and building registries so that all information on property is accurate and updated. Regular re-appraisal of property values is also most efficient when digitalised, for example through computer-assisted mass appraisals (CAMA), as it is done in the Netherlands (Box 2.3). Such methods provide a large number of property valuations in a short amount of time while ensuring better accuracy and consistency (OECD, 2021[57]).

Particular attention should be given to the administration of the recurrent tax on residential property. The high-quality data and technical capacity requirements to perform regular and accurate property appraisal could be an obstacle for local governments with limited resources. A higher level of government, such as regions, could therefore be better equipped to undertake such tasks. Alternatively, local governments should be provided with adequate financial and technical capacity, while smaller local governments with more limited administrative capacity could strengthen cooperation to reduce costs, for example with joint municipal offices arrangements, as in the United States (OECD, 2021[57]). The central government should also supervise the process in order to guarantee uniform quality standards and uniform valuation across all municipalities. The Netherlands is an example of a successful decentralised and efficient property tax administration. The Dutch model combines a decentralised process to establish annual market value via the use of a mass appraisal system, with the central government ensuring uniform procedures and quality standards (Box 2.3).

A property value-based recurrent tax on residential property can also encourage a more efficient use of the current housing stock. In 2021, vacant dwellings represented 17% of the housing stock in Slovakia, a relatively high share (Figure 2.14, panel A). While on average districts with low population density show higher vacancy rates, non-negligible vacancy rates are also present in districts with high population density, such as Bratislava and Košice (Figure 2.14, panel B). Vacancies reduce the supply of dwellings available for purchase or rent, putting additional upward pressure on house prices, especially when located in highly demanded areas. Gradually transitioning to a higher recurrent tax on residential property based

on regularly updated values would help address this issue, as it would increase the cost of keeping properties unused, especially in high-demand areas with higher property values. Additionally, the authorities could consider introducing specific taxes on vacant dwellings (on top of regular property taxes), following the examples of some municipalities in Australia, Canada and France. These taxes have proven to be successful in reducing vacant homes; however, they necessitate thorough monitoring and compliance checks, which can add to administrative costs (Segú, 2020[58]; OECD, 2022[43]).

Figure 2.14. The share of vacant dwellings is relatively high



Note: Data for the Slovak Republic are based on the Population and Housing Census 2021 and refer to the following categories of dwellings: accommodations for single family houses, residential buildings and other residential buildings.
Source: OECD Affordable Housing database; and Slovak Republic's Population and Housing Census 2021.

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Box 2.3. A successful example of property tax administration in the Netherlands

The Netherlands offers a successful example of nationwide property tax administration. In 1992 the administration of property taxes has been decentralised from the central government to the 399 municipalities. Local authorities are responsible for activities such as the maintenance of fiscal cadastres, property valuation, tax collection and tax rate setting, while the central government is responsible for controlling and levelling the quality of the tax administration across the country. Properties are re-valued every year by local governments, but they are subject to central government oversight. The central government examines the uniformity of the valuations performed by local governments through the National Valuation Board, so that values are comparable across municipalities.

Residential properties are typically assessed using the sales comparison approach, which is implemented through the Computer-Assisted Mass Appraisal (CAMA) system. Mass valuations involve the utilisation of various data sources, including the System of Register Database, information from real estate advertisements, specific data collected by municipalities and from interactions with taxpayers through online questionnaires or in the form of complaints and appeals (e.g., improvements' quality and maintenance). Communication with taxpayers is mostly online (80% online and 20% by mail).

Source: (OECD, 2021[57])

Achieving fairness and political acceptance of a property tax reform

Property tax reforms can be highly unpopular, especially in countries like Slovakia where owner-occupied housing is widespread, and many property owners are low-income households. Attempts to reform the recurrent immovable property tax in the past have faced strong political opposition. Switching to market-based property valuations could imply a steep rise in the tax bill for many households, especially since houses and apartments were often acquired cheaply during the privatisations in the 1990s and went through several waves of renovations that potentially increased their values (Blöchliger and Diagne, 2023[59]).

However, several options in the tax design could be considered to improve political acceptance. Several OECD countries have successfully implemented property tax reforms. For example, in 2017 Denmark implemented a reform to align cadastral values of land and properties to market values. To alleviate the effects of the increase in tax obligations, the reform was phased in gradually and accompanied by lower statutory tax rates, a tax rebate, and the deferral of payment to after the sale of the property. Similarly, Ireland introduced a property tax reform to align cadastral values to market values and attenuated the impact on taxpayers by introducing a tax deferral option. Such experiences suggest that a gradual phasing-in of the taxes on residential property and tax deferrals, for example paying the tax only when a house is sold or bequeathed, can increase acceptance and help avoid an abrupt hike in tax bills that would hurt homeowners (see Box 2.4). Additionally, allowing for paying the tax in instalments, as is done in Canada, Denmark, or the United States, may help households to overcome liquidity constraints and improve tax compliance. Furthermore, progressive taxation, by setting progressive tax rates or by granting exemptions or credits, can protect low-income households and thereby bolster fairness and acceptability of increased property taxation. For example, a flat-amount exemption would have a progressive impact because lower-income households tend to have less valuable properties, so the relief accounts for a larger share of their home values. However, tax reliefs should be targeted and carefully designed to avoid introducing distortions in the ownership of different asset categories and to avoid benefiting owners of low-valued properties with high income or wealth (OECD, 2022[43]). Finally, progressivity should be assessed in a comprehensive reform package shifting the burden from labour to property and environmentally harmful activities, which has the potential to reduce distortions to economic growth and foster political support, as discussed in *Chapter 1*.

Box 2.4. Property tax reforms in Denmark and Ireland

Denmark

In 2017, a major property tax reform was passed which entailed a reassessment of properties' fair market values. As part of this reform, property values have been updated biennially since 2020, and new tax liability assessments began to be issued in 2021. These reassessments were expected to result in notable increases in tax obligations, especially in areas where house prices had risen considerably since properties had not been revaluated for nearly two decades (tax freeze). In order to mitigate the impact of rising tax liabilities and gain political support, the government incorporated the property value update into a comprehensive property tax reform. As part of this reform, the statutory property tax rate was reduced from 1% to 0.6%, and a surtax specifically targeting high-value properties was implemented. To address liquidity concerns of property owners, homeowners whose overall property taxes increased with the new system were granted a tax rebate in 2021. Additionally, they had the option to defer the increase in recurrent property tax liabilities until the sale of the property. The comprehensive approach to Denmark's property tax base reform has contributed significantly to its political success. While measures compensating adversely affected taxpayers will impact tax revenues in the short run, the reform increases equity and the future revenue-raising potential of the tax and is expected to reduce house price volatility in the long run.

Ireland

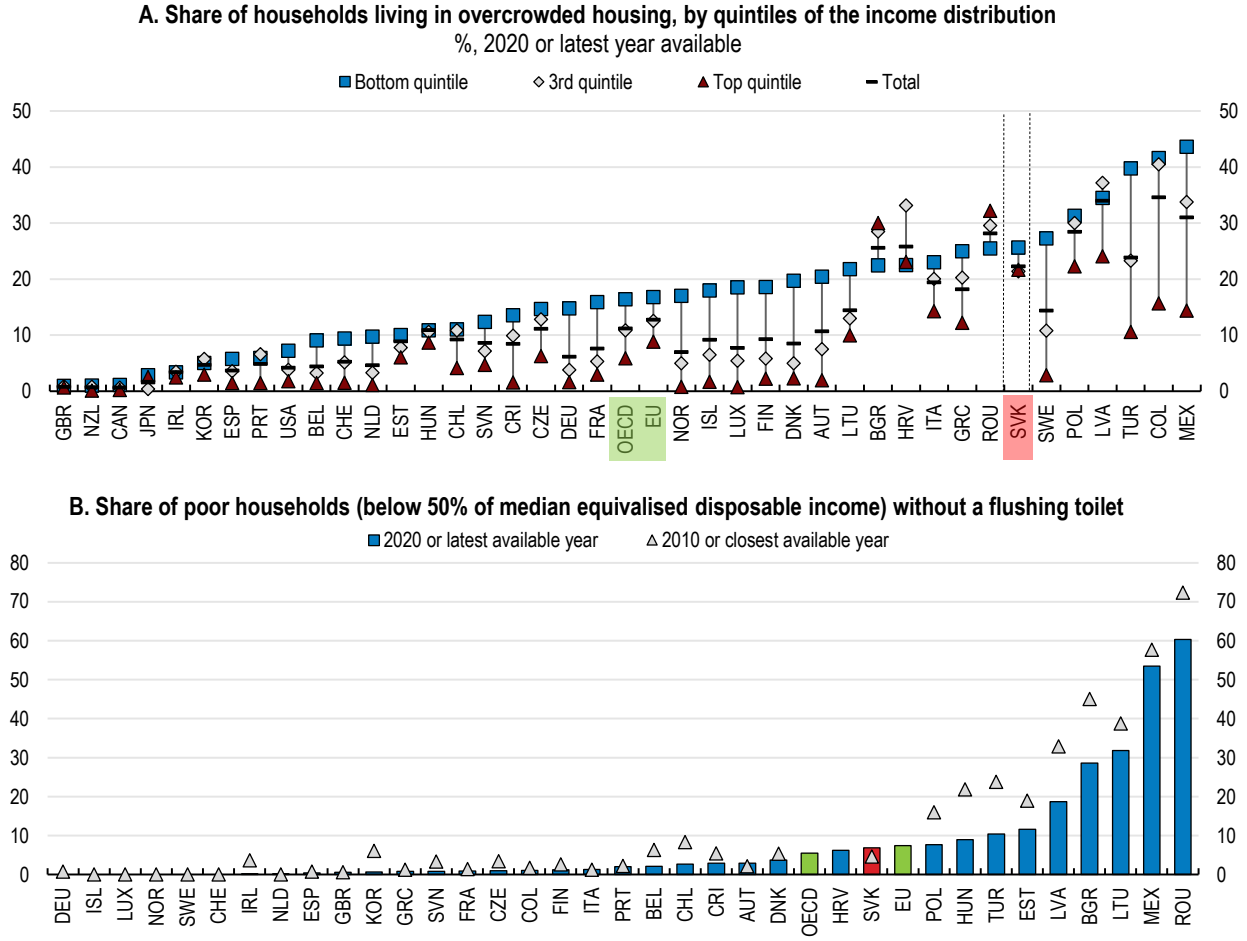
A local property tax was introduced in 2013, but property values remained outdated, and properties constructed after 2013 were not subject to the tax. In 2021 the government introduced a reform of the local property tax that reduced tax rates, expanded the tax base, and required taxpayers to update their self-assessed property valuations every four years. Additionally, previously exempt houses constructed since 2013 were brought into the scope of the tax. The reform was expected to increase the recurrent property tax burden for about a third of taxpayers. To support lower-income households, the reform broadened eligibility to property tax deferrals and lowered the interest charged on deferred tax payments.

Source: (OECD, 2022[43])

Enhancing housing inclusiveness

Without government intervention, private markets are not able to provide housing at accessible prices for all (Quigley and Raphael, 2004[60]; OECD, 2022[44]). In Slovakia, about a third of low-income households are overburdened by housing costs, and many households live in poor quality housing conditions, such as overcrowded dwellings and dwellings that lack basic living facilities (Figure 2.15). Living conditions in some parts of the country, especially in the East, are of lower quality than in other regions. Such regional disparities are partly linked to the presence of a higher concentration of Roma settlements, which suffer from particularly dire living conditions (Figure 2.16). Also, homelessness has reached an alarming dimension over the past ten years. Despite improvements, government support remains insufficient to effectively tackle these challenges. There is scope to expand targeted public support for the most vulnerable, scale up successful local initiatives nationwide, and expedite the implementation of planned policies.

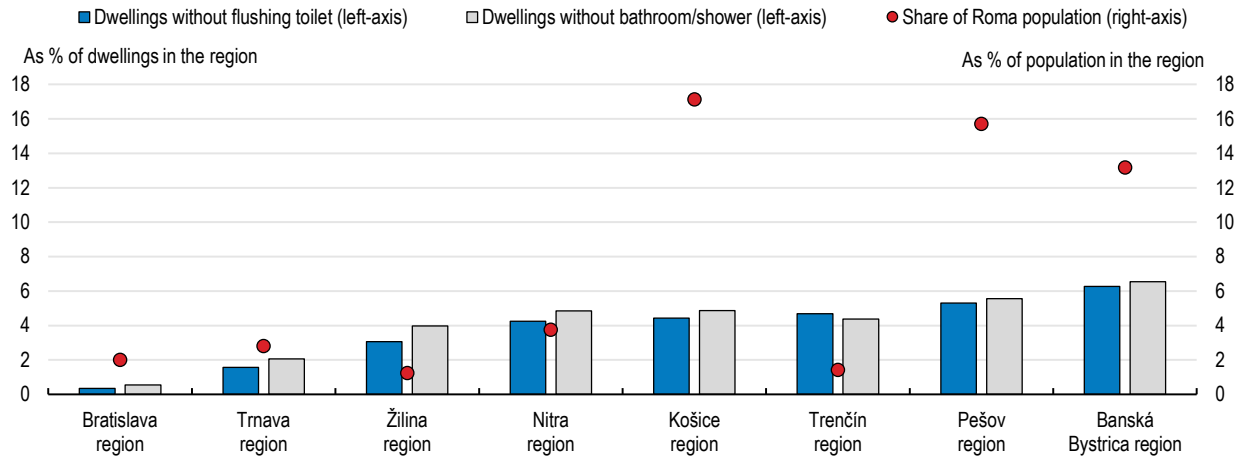
Figure 2.15. Many low-income households live in inadequate housing



Source: OECD Affordable Housing database.

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Figure 2.16. Some regions and population groups suffer more from poor living conditions



Source: Slovak Republic's Population and Housing Census 2021; Sika P, Vidová J, Rievajová E., Regional View on Housing of the Marginalised Roma Population in the Slovak Republic, Sustainability (2020), 12(14):5597, https://doi.org/10.3390/su12145597; OECD calculations.

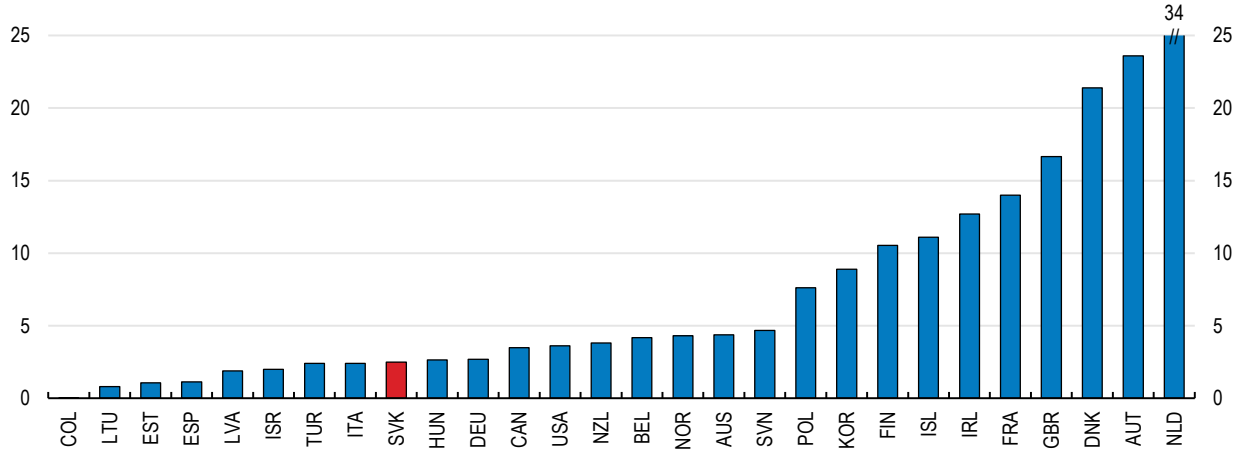
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Expanding the stock of social and affordable housing

Slovakia faces significant shortages in the supply of social rental housing. The stock of social rental housing is relatively low, representing only 2.5% of the total housing stock (Figure 2.17). High demand for social rental housing facing limited supply results in long queues to access dwellings with regulated rents, in some municipalities. For example, in the municipality of Bratislava there are about 600 households waiting for social housing with an estimated waiting time of 6 years.

Figure 2.17. The stock of social rental housing is low

Social rental dwellings, as % of the total housing stock, 2020 or latest available year



Source: OECD Affordable Housing database and Slovak Republic's Population and Housing Census 2021.

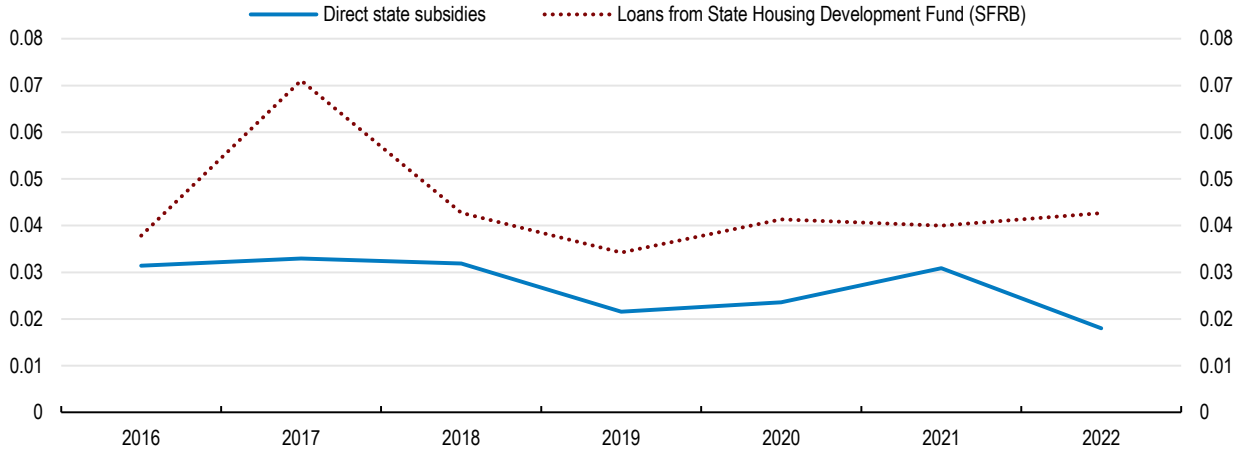
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Public resources allocated to the construction of social rental housing are low. In 2022, expenditure for the construction (or acquisition) of social rental housing represented only 0.06% of GDP (Figure 2.18). In comparison, Austria – a country often considered a good example for providing good-quality social housing, promoting social diversity within social housing, and achieving affordability – spent around 0.25% of GDP in 2020 (OECD, 2020[2]). Additionally, allocations of the state budget for the provision of social rental housing have been decreasing over time (from EUR 65 million in 2017 to EUR 45 million in 2022).

Local governments face several barriers to the development of the social housing stock. Municipalities are responsible for providing and managing the social rental housing stock. They receive financial support for construction or acquisition of social housing via subsidies and long-term loans with favourable conditions from a dedicated state fund, the State Housing Development Fund (SHDF) (Box 2.5). Even though the combination of loans from the SHDF and subsidies can cover up to 100% of the construction or acquisition costs, municipalities struggle to find resources to cover the difference between operational costs (maintenance, repairs, administration, etc.) and revenues from the management of social rental housing. Moreover, municipalities face a shortage of municipal land available for the development of social rental housing, substantial bureaucracy connected with filing applications for obtaining support, and unclear procedures related to public procurement of rental apartments which, in case of misconduct, lead to financial penalties. Stigma associated with social housing can also contributes to low support from the local community, which leads to a lack of willingness of local authorities to invest in such activities (MoF, 2020[61]). As a result, withdrawal of funds for construction or acquisition of social housing from the dedicated SHDF was only equal to 30% of the available resources.

Figure 2.18. State support for social rental housing is low and has decreased over time

Direct state subsidies and granted loans from the SHDF, as % GDP



Note: Loans from SHDF are partially funded by the State.
Source: Ministry of Transport of the Slovak Republic.

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Some progress has been made recently to incentivise municipalities to invest in social rental housing, but the central government could be more involved in supporting the expansion of the sector. The adoption of the amendments to the Public Procurement Act in 2022 (see *Chapter 1*) should help speed up the procurement of rental housing by local authorities. Moreover, recent regulatory changes have allowed municipalities to use loans at favourable conditions from the SHDF to buy land for developing social housing, which is welcome. In addition, the central government could consider setting minimum shares of social housing within municipalities, as for example is legislated in France. Alternatively, municipalities could require that new development projects assign a share of their flats to social housing, following the example of London, New York, and Vienna, and support the construction of such apartments through loans at favourable conditions from the SHDF (OECD, 2023[42]).

The central government should set clear targets for the development of social housing units in close collaboration with municipalities, and authorities should ensure adequate funding from the central and municipal government budgets for their construction and operation. The latest housing strategy proposes to gradually raise the total spending for the development of social rental housing and the renovation of residential buildings to 0.5% of GDP per year by 2030 (Ministry of Transport and Construction, 2020[12]). While this is generally welcome, it is important to set and periodically review specific binding targets for social housing units to establish funding needs. This should be done in consultation with the municipalities that are best placed to assess the needs of new social housing construction. Slovenia, for example, developed a tool *(Priority Development Areas for the Housing Supply, PROSO*) to quantify housing needs in different parts of the country and guide housing investment at national scale in strict collaboration with municipalities. The authorities are then obliged to allocate 60% of resources from the Housing Fund of the Republic of Slovenia according to the needs identified in the PROSO. The remaining 40% of investments are allocated on a needs' basis assessed through applications submitted by municipalities to the Fund (OECD, 2023[62]).

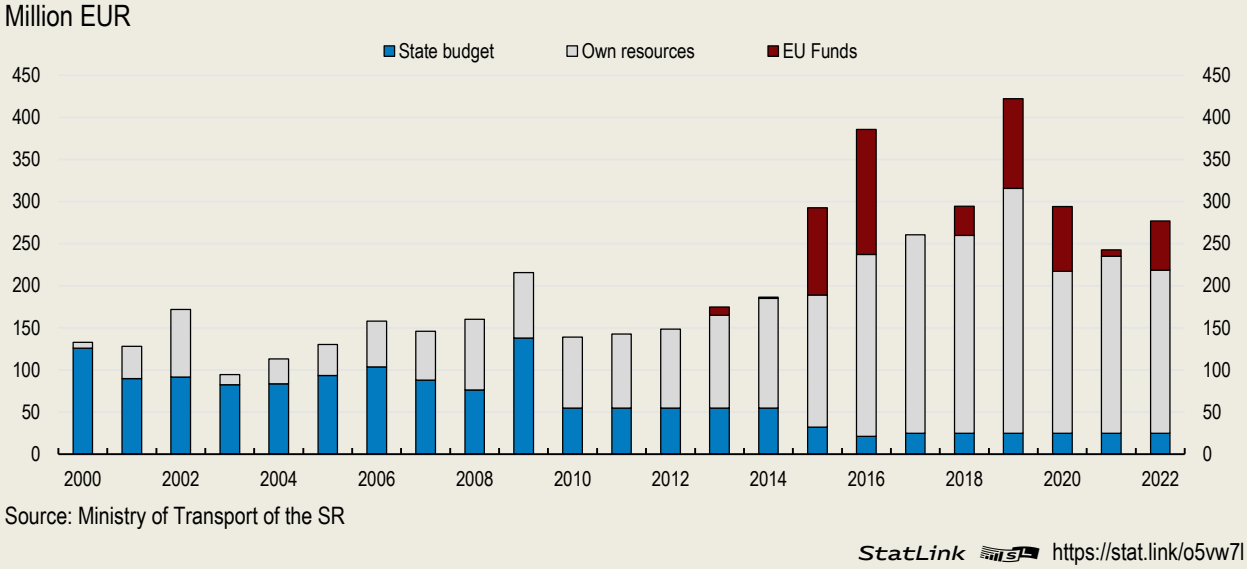
At the same time, the government could consider options to increase revenues from the management of social housing and reduce construction costs, without compromising affordability and the quality of the new housing stock. The maximum amount of annual rent in social housing units, set by the Ministry of Finance, is equal to 5% of the eligible maximum acquisition costs of the dwelling. This does not allow rents to evolve according to economic conditions, making it difficult for municipalities to finance operational costs. For instance, in Bratislava the maximum average monthly regulated rent is approximately EUR 1 to 3 per

square meter, while monthly operational costs amount to EUR 4 to 5 per square meter, making it unattractive for the municipality to invest in social housing. The government could consider allowing reasonable increases in regulated rents, for example by indexing them to inflation, as is done in other OECD countries, such as Denmark and Slovenia. To ensure that rents remain affordable, supplementary financial support targeted to the most vulnerable households in the form of monthly allowances (see below) could be introduced. In Slovenia, for example, in addition to the reduced rent level, the government sets a supplementary allowance for vulnerable households according to the difference between the reduced rent and the minimum income threshold. In light of the rising prices of building materials in recent years, the authorities could also consider innovative options to lower construction costs. In Germany, for example, the Ministry of Interior and Construction worked together with construction and architect associations to identify providers of serial and modular constructions for affordable housing projects (OECD, 2020[40]).

Box 2.5. The State Housing Development Fund: a valuable instrument for the development of social rental housing and housing renovations

The State Housing Development Fund is a key instrument of the Slovak Republic's housing policy. It was introduced in 1996 to respond to growing housing needs following the significant fall in housing construction in the post-Communist period. The fund is administered by the Ministry of Transport. It supports the expansion of both homeownership and rental housing and improvements to housing quality. The Fund provides favourable long-term loans to municipalities (and public not-for-profit organisations) for the construction of social rental housing and affordable private rental housing, financing up to 100% of acquisition costs for a term of up to 40 years. Construction of dwellings needs to be completed within 24 months of the loan agreement. Additionally, loans can be accessed by individuals to finance the acquisition of a home (for young couples meeting certain income requirements). The Fund is also a key financing tool for renovation works to improve thermal insulation and energy efficiency of the dwelling. The Fund operates as a revolving fund: it uses public funds and its own funds to support the construction and renovation of residential buildings via favourable loans. The loan repayments and interests are then reinvested in new loans. Over time, the Fund has mostly become self-sufficient and has benefitted from EU structural funds, thus progressively reducing the contribution of the State budget.

Figure 2.19. Sources of funding for the State Housing Development Fund



Source: Ministry of Transport of the SR

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To reduce the burden on municipalities, partnerships with limited- and non-profit housing associations could be encouraged. Experience from other countries, such as Austria and the Netherlands, shows that

housing associations are key actors in the delivery and management of the social and affordable housing sector. Non-profit associations, with their deep community connections and expertise, can also be well positioned to not only provide housing but also deliver vital social services that enhance the living conditions of tenants (Bratt, 2007[63]; MoF, 2020[61]). While the non-profit sector in Slovakia has limited experience in managing the social housing stock, there have been some successful initiatives, such as in the field of integration of marginalised Roma communities (see below).

Conditions for eligibility to social rental housing could be reformed to ensure wider access to vulnerable groups. Except for the statutory requirements, which mandate that households' income must not exceed three times the substantial minimum (or four times in the case of individuals with disabilities and single parents), the eligibility criteria for accessing social rental housing are determined by municipalities. While the statutory requirements based on income are not stringent to allow access to middle-income households and promote social mix (more than 60% of individuals meet such conditions according to the Ministry of Transport), the requirements of municipalities can sometimes be overly restrictive. For example, the pre-payment of a (maximum) deposit of six-month rent, permanent residence in the municipality for some minimum duration, and absence of debts/arrears owed to the municipality, creating barriers to accessibility for certain vulnerable groups (MoF, 2020[61]). Authorities could therefore consider relaxing these municipal requirements in conjunction with efforts to expand the housing stock. Moreover, eligibility criteria based on income and social conditions should be regularly reassessed to ensure prioritised protection to the most vulnerable. At present, this process occurs every three years (after which the sitting tenants are replaced with other eligible applicants if they no longer meet the criteria), but authorities could consider reassessing eligibility conditions more frequently (e.g., yearly). Additionally, it is crucial that eligibility for social housing is portable across cities and regions to ensure low-income workers' mobility.

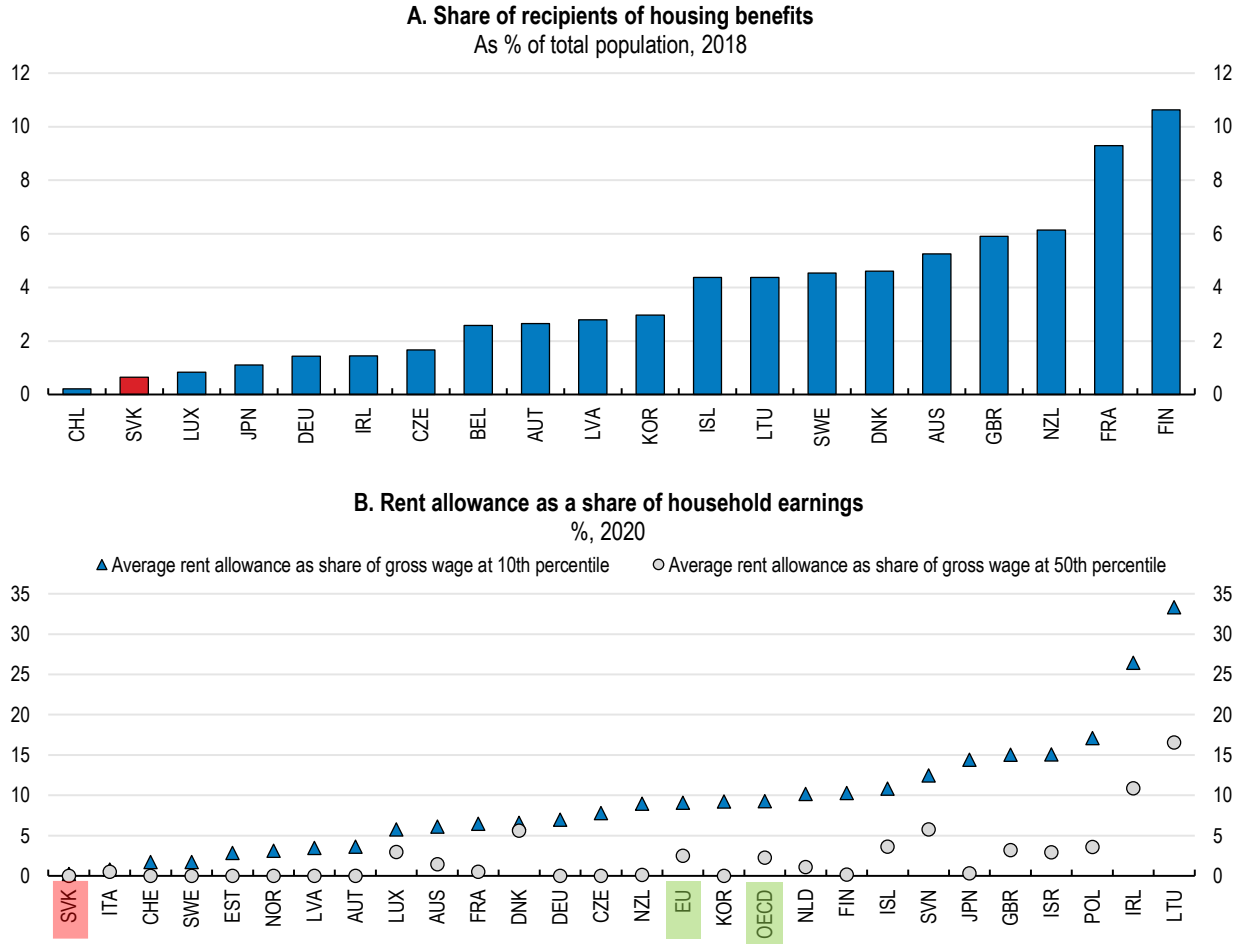
A broad social mix in social rental housing could be achieved with improved urban planning. Social housing is often developed far from job centres and without easy access to public transport (MoF, 2020[61]). This can aggravate segregation, result in deepening poverty and crime, and exacerbate stigmatisation. Improved urban design to better connect social housing to the city's core would help to integrate residents and support their inclusion. This was a key element of successful housing policy in Korea, where measures to boost housing supply were taken in conjunction with improved urban planning. In the early 1980s, amid a pressing housing shortage, the central government allocated large plots of developable land for housing construction. Public developers were given authority to acquire non-urban land in the outskirts of the main cities through expropriation. The gains from land development were then used to finance the provision of affordable low-income housing as well as on-site infrastructure and transport connecting the newly built towns to cities in the capital region. This programme was successful in delivering more than 2 million new high-quality housing units between 1988 and 1992, of which 250 000 units were provided to poor urban households (Kim and Park, 2016[64]).

Reforming housing allowances to make them more effective

In Slovakia housing allowances are low, linked to strict eligibility conditions and received by a very limited number of people (Figure 2.20). Housing allowances are provided to low-income homeowners and renters who qualify for "material need" assistance. However, they are limited in amount and scope, reaching only a small portion of those in need. The average share of housing allowance is only 0.3% of the (gross) wage for a household at the 10th percentile of the wage distribution, significantly lower than the 9.2% OECD average (OECD, 2020[2]). Additionally, in contrast to most OECD countries, the amount does not sufficiently account for the household's composition and size (the amount of the housing allowance is EUR 58.5 per month for singles or EUR 93.4 per month for households with 2 or more persons). Furthermore, conditions to receive such allowances are very strict. To qualify for "material need" assistance the income of household members must be below the subsistence minimum (EUR 234.34 per month in 2022), and the household needs to be eligible for other specific benefits (maintenance for children and spouses, compensation income for temporary incapacity). In addition, households need to prove that they own or

lawfully occupy the dwelling they live in and have no rental arrears. This condition is particularly difficult to meet for some population groups, such as the Roma, who do not always possess a legal title to the land where their residence is located. Accelerating the formalisation of property rights in Roma settlements as suggested below would help them meet such eligibility condition.

Figure 2.20. Housing allowances are low and accessible to only few households



Note: In Panel A, data for Austria refer to the Vienna region only.
Source: OECD Social Benefits Recipients database; and OECD Affordable Housing database.

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In line with other OECD countries, eligibility conditions for housing allowances should be based on income, size, and composition of the household, as well as the amount of housing costs. These criteria should then also be used to determine the amount of support.

The authorities have recently taken steps to revise eligibility conditions and increase the allocated amount for housing allowances. Since July 2023, eligibility conditions and the amount of housing allowances have been linked to the number of household members. Additionally, the amount of the benefit has been indexed to inflation to protect vulnerable households from the rise in the cost of living. At the same time, a proposal to introduce housing allowances as a separate social benefit, no longer linked to the benefits for households in "material need", was put forward. These developments are welcome.

Eligibility conditions should be carefully and regularly assessed to ensure that housing allowances are accessible to those most in need. In light of extended waiting times for accessing social and affordable housing (see above), and considering the time required to expand the social housing stock, the authorities could also consider prioritising housing allowances for households on the municipal waiting list for social

housing. This would ensure that these households have the means to afford rental payments while waiting for a permanent housing solution. A similar scheme is in place in Belgium ("*Vlaamse Huursubsidie"*) and Lithuania ("*Busto nuomos mokescio kompensacija*"). Such a scheme provides public support to eligible households that fulfil income criteria to rent a unit in the private rental sector while they wait for social housing (OECD, 2023[42]).

Efforts to expand housing allowances should be taken in conjunction with efforts to improve the overall responsiveness of housing supply. Well targeted and adequate housing allowances have the potential to reduce (post-transfer) income inequality and spatial segregation. Additionally, in contrast to social housing with non-portable rights, housing allowances are considered not harmful to residential and job mobility. However, allowances support housing demand and, where supply is rigid, may have the unintended consequence of putting upward pressure on house prices and rents, benefitting landlords who capture a significant share of the subsidy through increased rents (OECD, 2021[6]; Chapelle et al., 2023[65]). To benefit from their redistributive capacity, the authorities should therefore simultaneously boost efforts to improve housing supply responsiveness.

Improving living conditions for the Roma population

The Roma community in Slovakia – one of the largest in the EU, accounting for 7-9% of the total population – suffers from precarious living conditions. A large share of Roma experience housing deprivation, with 86% of Roma families living in overcrowded dwellings that often lack basic facilities, such as access to tap water and basic sanitary facilities (Figure 2.21). Many do not have sufficient income to build or buy adequate housing and live in informal houses, often made of wood, soil, mud, or other materials, and that do not meet construction standards (Sika, Vidová and Rievajová, 2020[66]).

For historical reasons many Roma live in informal settlements without legal title to the land. During the Second World War and the communist period many Roma were relocated to state-owned land. With the transition to a market economy, state-owned land was returned to previous owners, resulting in a high share of Roma settlements being located on illegal plots (OECD, 2019[67]). The lack of title to the land has severe consequences for the living conditions of the Roma, as this does not allow municipalities to provide basic infrastructure, such as water pipelines, electricity, sewerage or even roads. Moreover, the lack of title leads to evictions and homelessness (Sika, Vidová and Rievajová, 2020[66]). The lack of formal title also excludes many Roma families from receiving any form of state support, such as housing allowances (see above). Precarious living conditions result in poor health conditions, low educational enrolment and attainment, and high social exclusion.

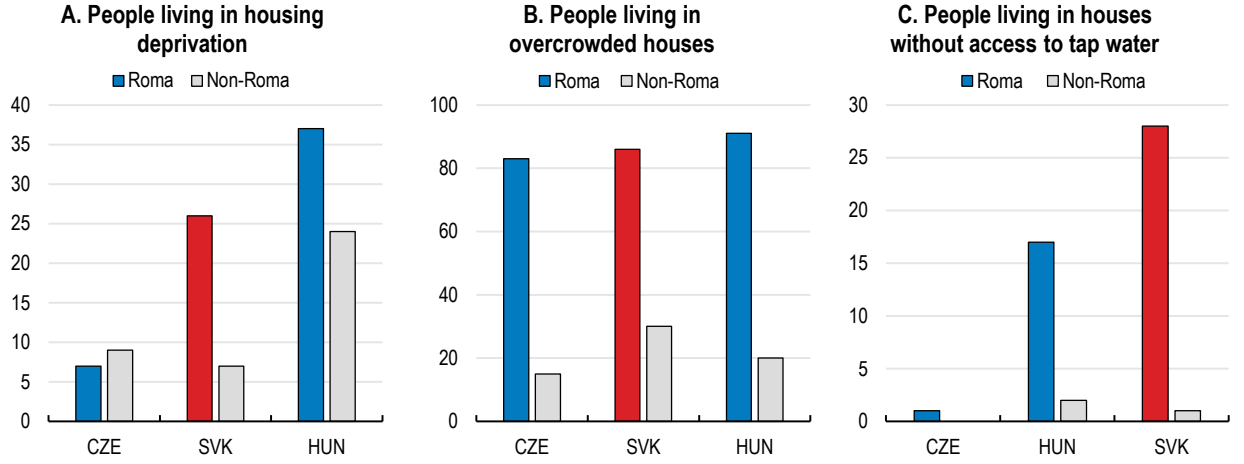
As argued in past Surveys (OECD, 2019[67]), the authorities should accelerate policy action to support the formalisation of property rights in Roma settlements. This is a necessary step to limit forced evictions and homelessness among the Roma and to allow municipalities to provide the necessary infrastructure investments to the Roma settlements. The updated Strategy for Equality, Inclusion and Participation of Roma (Office of Plenipotentiary, 2021[68]) allocates EU resources to projects that offer technical support to municipalities with Roma communities, to enable them to secure land ownership. Past experience shows that such projects can be successful, but their outcome largely depends on municipal capacity, collaboration between local and central authorities and the personal involvement of members of the Roma community (Box 2.6) (Kahanec et al., 2020[69]).

Public investment in basic infrastructures in Roma settlements needs to be strengthened and construction of good quality housing incentivised. This could be done by expanding the stock of social rental housing (see above) and scaling up successful local projects of assisted housing, such as the *Dom.ov* initiative. This initiative allows families to apply for a micro-loan at favourable conditions for the self-construction of a house. The house is built by family members, under the supervision of a technical expert. Families are assisted in all steps and in communication with the relevant authorities for obtaining the necessary permits. Some EU funds have been allocated to this purpose. However, the lack of technical capacity and resources

of local governments delays the implementation of such projects (Kahanec et al., 2020[69]). To strengthen municipalities' effective utilization of these funds, adequate technical support from the central administration should be provided. Additionally, after the end of the EU programming period, these programmes should continue and be funded from the national budget, especially to support Roma settlements with the worst living conditions.

Figure 2.21. Many Roma live in precarious conditions with limited access to basic infrastructure

%, 2021



Note: Data for non-Roma refers to 2020. In Panel A, four dimensions are used to determine housing deprivation: accommodation is too dark, has problems with humidity, has no shower/bathroom inside the dwelling or has no (indoor) toilet. Housing deprivation requires at least one of these dimensions.

Source: European Union Agency for Fundamental Rights (2022), "Roma in 10 European Countries – Main results, Roma Survey 2021".

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More efforts are needed to reduce segregation of the Roma community. Providing basic infrastructure to the settlements is a necessary first step to facilitate the integration of the Roma, as it for example improves hygiene conditions and access to schooling. Social mix could also be promoted with the inclusion of mandatory shares of social rental housing in new housing developments for vulnerable low-income households, including the Roma communities among others. For example, in Vienna, London and New York new development projects must assign a small share of their flats to socially disadvantaged groups at reduced rents (see above). Such measures should be coupled with supportive services to help families adapt to the new community (OECD, 2019[67]).

Box 2.6. Legalisation of property rights in the municipality of Raslavice (Prešov region)

The municipality of Raslavice – a village with high incidence of Roma population – has been successful in drawing EU funds for Roma inclusion over several years and improving the housing and living conditions of the Roma community. The municipality of Raslavice started in 2010 to sell municipal land at reduced prices of 1 EUR/m2 to Roma families and to legalise the land where houses were already built. The municipality received expert legal counselling for the land sale and assisted Roma residents with the necessary administrative processes to legalise houses. The municipality also helped build new houses by setting up a municipal social enterprise, mostly employing people from the Roma community, who performed construction works. Today, 90% of the Roma settlement is legalised. This allowed the municipality to provide basic infrastructure to the settlement, such as public water, a sewer system, and an electrical grid. However, residential segregation remains an issue, as most of the legalised land was located within the settlement in a remote area without access to public transport.

Source : (European Commission, 2019[70]; Kahanec et al., 2020[69])

Promoting efforts to tackle homelessness

The number of homeless people has increased significantly in the past decade. According to the latest population census, there were 71 076 people (excluding the Roma) without homes in 2021 (1.3% of the population), compared to only 23 483 in 2011 (0.4% of the population). This increase partly reflects changes in the definition of homelessness in 2021 to include individuals living in inadequate housing in addition to those living on the streets. Comparison across countries is difficult, as homogeneous definitions of homelessness are missing, in addition to many other methodological challenges (OECD, 2020[2]).

Until April 2023, a national strategy for preventing and ending homelessness was lacking. Social and housing policy mostly integrated the homeless into more general categories, such as "persons at risk of social exclusion", or persons "in material need". Additionally, a specific action plan for ending homelessness was lacking; and, given the strict eligibility conditions of housing allowances and for accessing social housing, only few homeless persons can benefit from the available state support. Moreover, a systematic collection of data at national level to monitor this issue is undertaken only every ten years as part of the population census (the latest in 2021), and the Statistical Office of the Slovak Republic has defined the methodological basis for identifying homeless for the first time during the 2021 Census following international recommendations.

So far, most efforts to address homelessness have been taken at the local level. The municipality of Bratislava, together with local NGOs, has conducted the first thorough census of homeless people in 2016, which led to a strategic and evidence-based approach to address homelessness within the municipality. In 2021, the municipalities of Bratislava and Košice, with the support of a local NGO and EU funds, took the lead in initiating "Housing First" projects. These innovative programs facilitated the relocation of homeless families to social rental housing, accompanied by rent assistance and intensive community support (Ondrušová, Turkovič and Gerbery, 2022[71]; Ondrušová and Turkovič, 2022[72]). However, these initiatives have been limited in scope – only 9 families were supported in Bratislava and 23 in Košice – as limited financial and human resources at the local level prevent their broader outreach.

Recently, the authorities have taken significant steps to tackle homelessness at a national level. The latest housing strategy stresses the need to intervene to improve housing conditions of homeless people with supported housing pilot projects. In 2021 and in December 2023, the Ministry of Labour, Social Affairs and Family conducted tenders for financial support for affordable housing with elements of housing first, i.e., an assistance approach that prioritises providing permanent housing to people experiencing homelessness before helping them to integrate in social life and apply for jobs. In total, by the end of 2023, the ministry approved 18 projects which will be supported with EUR 4.6 million in funding. In April 2023 the previous government adopted a national strategy for preventing and ending homelessness by 2030, which extends beyond housing solutions, and addresses issues related to healthcare, education, employment, and data collection. The National Concept will be followed by an action plan in 2024 specifying measures to achieve these goals. These are welcome steps, and while implementing the plan the authorities should promote coordination between the central and local governments. Central and local authorities should jointly develop tailored strategies and ensure that the local government has the necessary resources to implement the designed policies. Examples from Denmark and Finland show that adequate support from the central to the local government can effectively help fight homelessness (Box 2.7). Successful local initiatives could be scaled up to the national level. For instance, following the example of the census in Bratislava, the authorities should enhance the capacity to regularly collect data to enable more regular monitoring of homelessness and to better understand the challenges and needs of different homeless populations.

Box 2.7. Coordination between central and local government in fighting homelessness in Denmark

Denmark has consistently prioritised addressing homelessness as an integral part of its national policy agenda since 2009. This commitment involves close collaboration with municipalities to effectively implement the national strategy. In the latest Action Plan, the central government has established partnerships with 24 municipalities, offering various forms of support. This includes conducting assessments to identify gaps in current municipal approaches to homelessness, providing advisory services to assist in the implementation of "Housing First" principles and allocation of funding for pilot projects. Municipalities receive funding either to pilot an innovative approach recommended by the central government or to implement their own solutions. Furthermore, the government is actively developing national guidelines and collecting a compendium of best practices across the country.

Source: (OECD, 2020[73])

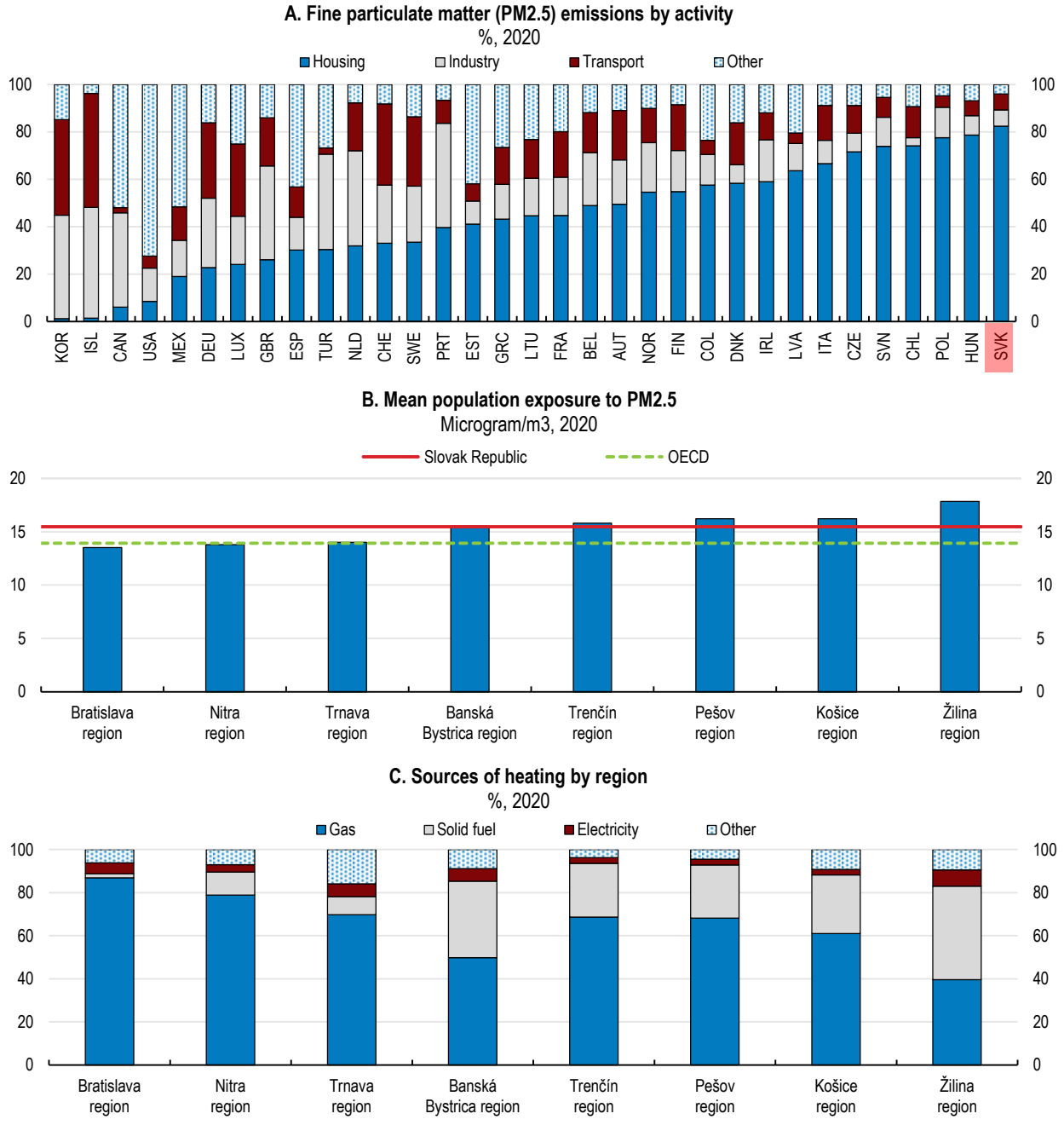
Improving the energy efficiency of the housing stock

Most of the housing stock is old and energy inefficient. Despite progress, the energy use intensity in Slovak residential buildings is still above OECD average (see above). This contributes to households allocating 8.5% of their budget to cover electricity and gas bills. In comparison, other OECD countries spend on average 3.5% of their budget on these expenses. The situation is particularly dire for the most vulnerable, who often lack the means to keep their dwelling adequately warm, a concern that has been further exacerbated by the rising energy prices following the Russian war of aggression against Ukraine.

Energy consumption for domestic heating is the largest contributor to high air pollution although transport and industry also have significant local impacts. The residential sector accounts for more than 80% of particulate matter (PM2.5) (Figure 2.22, Panel A). Despite progress, Slovakia is still one of the countries with highest exposure to particulate matter pollution, with some regions being more affected than others (Panel B). This is primarily due to the use of inefficient and high-emission domestic heating systems, such as boilers and heaters, and burning of poor-quality fuel such as coal, wood, or waste (Panel C). High air pollution negatively affects health by contributing to the incidence of asthma, cardiovascular problems, and lung disease, and leading to premature deaths. In the most afflicted areas of Žilina and Košice, more than 5% of premature mortality can be attributed to air pollution (IEP, 2021[74]). Against this background, the country has faced several EU infringement proceedings for failing to meet limit values for PM10 (IEP, 2022[75]).

Residential heating is responsible for 11% of CO_2 emissions. CO_2 emissions from housing depend on the carbon content of fuels combusted directly by households for heating, cooling and cooking (direct emissions) and of primary energy sources used to produce the electricity used by households and district heating (indirect emissions) (OECD, 2023[76]). Slovakia's electricity mix relies substantially on nuclear energy which, given its low carbon content, contributes to comparatively low indirect emissions. However, natural gas and solid fuels, such as coal, wood, or waste, are still the most used energy sources for housing heating and, contribute to higher direct CO_2 emissions compared to indirect emissions (Figure 2.23).

Figure 2.22. Residential heating is the major cause of air pollution

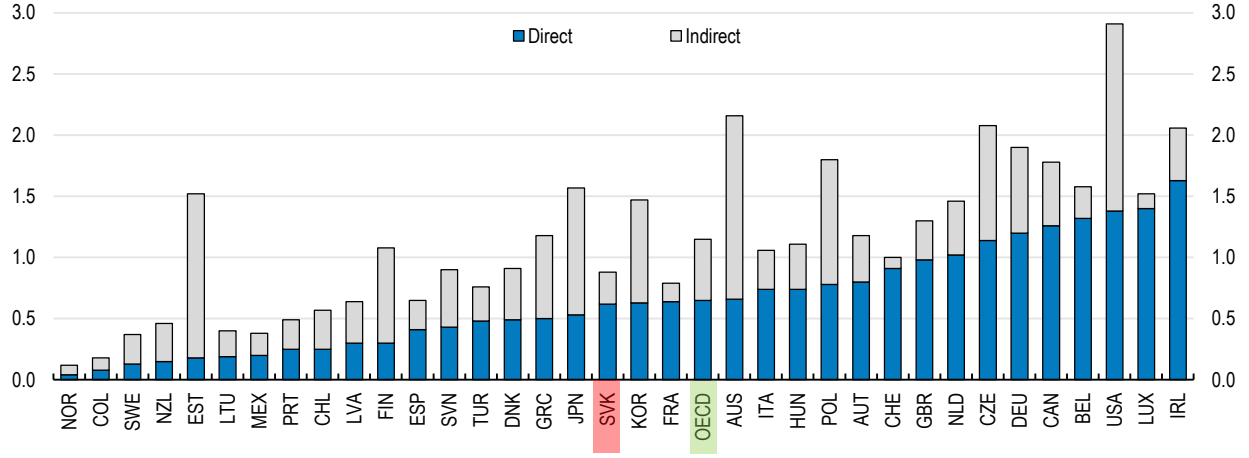


Note: In Panel B, 2019 for OECD.
Source: OECD Air Emission Accounts database; OECD Regional Statistics database; Slovak Republic's Population and Housing Census 2021; and OECD calculations.

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Figure 2.23. Residential heating by gas and solid fuels explains higher direct CO_2 emissions

Total CO_2 emissions per capita from the residential sector by country, ton, 2020



Note: Indirect emissions are calculated as follows: (Energy use)*(pe+pdh)*EF; where pe=proportion of energy generated by electricity, pdh=proportion of energy generated by district heating, and EF is the emission factor for electricity and district heating (Hoeller et al., 2023[77]).
Source: IEA (2021), Energy Efficiency Indicators Database; and IEA (2021), Emission Factors Database and OECD calculations.

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Slovakia has set targets in line with the EU regulations for reducing emissions caused by the residential sector. In line with the EU average, the National Air Pollution Control Programme (NACP) aims to reduce PM2.5 emissions by 49% in 2030 compared to 2005 across the economy. In line with the EU Fit-for-55 plan, which aims at reducing total GHG emissions by 55% by 2030, the Slovak Long-Term Renovation Strategy plans reductions of energy consumption in residential and non-residential buildings by 43% by 2030 and 60% by 2050, and of CO_2 emissions by 60% by 2030 and 87% by 2050, compared to 1990. Specifically, there are plans to retrofit 29% of residential buildings by 2030 and the entire residential building stock by 2041 (Ministry of Transport and Construction, 2020[78]). According to the Ministry of Transport, total CO_2 emissions from buildings in 2016 were reduced by 40% compared to 1990 (Ministry of Transport and Construction, 2020[78]).

Achieving such targets requires increased efforts to renovate the building stock and substitute fossil fuels (based on coal and gas) with renewable energy resources (biogas, solar, geothermal energy, and heat pumps) for heating. To incentivise and accelerate large housing renovations, a combination of carbon pricing, energy efficiency regulations, along with financial support for vulnerable households is essential. The Long-Term-Renovation Strategy estimates investment needs of EUR 17.3 billion over the period 2020-2050 for residential buildings (and EUR 5.5 billion for non-residential buildings). Funding is expected to be partly covered by EU resources.

Extending the EU Emission Trading System to the residential sector

Net effective carbon tax rates are currently low in the building sector but will increase from 2027 with the implementation of EU ETS II. The effective carbon tax rates on direct emissions from the building sector mainly comprise fuel excise taxes. However, exemptions of such taxes on the use of coal and natural gas for household consumption and on energy sources used to generate electricity and combined heat and power contribute to keeping the effective rate relatively low (Figure 2.24). While tax exemptions may help improve affordability, they distort price signals and are not well aligned with climate objectives. The EU plans to increase carbon prices for road transport and residential heating from 2027 with the implementation of EU ETS II will indirectly affect more than 50% of households, which currently use individual heating provided by fossil fuels (coal, natural gas). Households connected to the district heating system are already covered by the EU-ETS (IEP, 2022[75]). The increase in carbon prices will provide

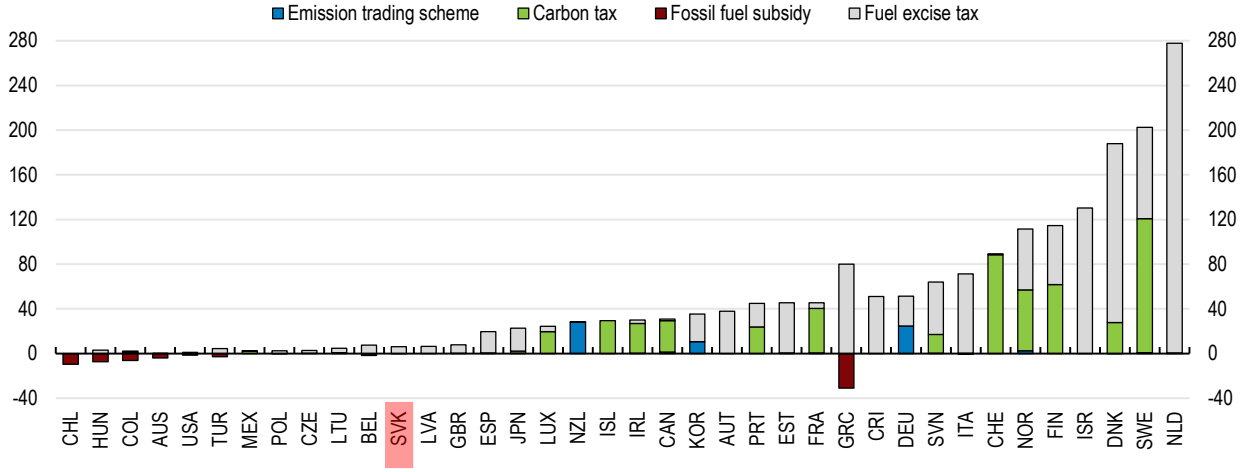
strong incentives for housing renovations and shifting to lower-emission heating systems. This will contribute to reducing energy use and CO_2 emissions from the building sector. To accelerate housing decarbonisation, authorities should anticipate EU plans and set up a national trading system in sectors not covered by the ETS with an emissions cap according to the national targets, similarly to what was done in Germany in 2021. Alternatively, an explicit carbon price outside the EU ETS could be introduced, and an increasing carbon price trajectory announced (see *Chapter 1*).

While pricing carbon is the most effective way to internalise climate externalities, the buildings sector is not as responsive to price signals as other sectors. This is partly because housing renovations are typically carried out infrequently (e.g., roofs are renovated every 50 years in Germany), and several market imperfections lead to underinvestment in energy retrofitting. These include credit constraints for households, limited homeowner awareness regarding the quality of insulation in their homes, and coordination issues for buildings with several apartments (representing 65% of the housing stock in Slovakia). Moreover, tenants usually have limited options to react to higher energy costs, while property owners may have weak incentives to invest in energy efficiency because they typically do not pay the energy bills (Hoeller et al., 2023[77]). However, this split-incentives problem in rented dwellings is less of an issue in Slovakia because of the limited rental market.

Addressing market failures requires the extension of mandatory high quality energy performance certifications, tightening regulations and introducing financial incentives to increase the feasibility and attractiveness of investment in low-emissions energy equipment. As the rental market develops, it will also be important to align the interests of renters and landlords with respect to such investments. The authorities could consider following the example of Germany, which in 2022 announced that the carbon tax liability would be split between landlords and tenants depending on the building's emission performance, with tenants in low-emission housing bearing most of the tax, while landlords being liable for most of the additional tax for carbon-intensive rental dwellings. Sequencing of the different policy instruments for the decarbonisation of the housing sector can play an important role for its effectiveness. Accelerating energy efficiency improvements via tighter regulations, in conjunction with financial support to vulnerable households and enhancing public awareness about the benefits of energy efficiency upgrades, can protect households against future energy price increases due to higher carbon pricing.

Figure 2.24. Effective carbon tax rates in the building sector are low

Estimated effective carbon rates in the building sector, EUR per tonne of CO_2, 2021



Note: The net effective carbon rate is composed of emission trading prices, carbon taxes, fuel excise taxes minus fossil fuel subsidies. The electricity sector refers to electricity generation, and the effective carbon rates do not incorporate electricity excise taxes.
Source: OECD (2022), Pricing Greenhouse Gas Emissions: Turning Climate Targets into Climate Action, OECD Series on Carbon Pricing and Energy Taxation, OECD Publishing, Paris, https://doi.org/10.1787/e9778969-en.

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Complementing carbon prices with energy performance certifications, regulations, and financial incentives for building renovations

Price signals to incentivise housing renovations should be complemented with highly reliable energy performance certifications (EPCs) and regulation. EPCs represent a reliable and standardised source of information regarding the energy performance of buildings, which also include practical guidance on how to move from one performance class to another. This enables easy comparison of energy performance of properties and tracking of worst performing properties. Higher energy performance certificates ratings can positively impact the market value of a property, incentivising homeowners to undertake renovations (Charalambides et al., 2018[79]; Hoeller et al., 2023[77]). Buildings with EPCs only represent 0.43% of the total housing stock in Slovakia. Requirements only apply to new buildings and properties for rental or sale. The restriction of such requirements to this category of buildings is in line with current European standards, but significantly reduces the effectiveness of certifications as an energy-saving tool.

Slovakia should make more efforts to gather high-quality reliable information on the energy efficiency of the residential building stock, by extending coverage of EPCs before 2030. This would help ensuring compliance with the EU Energy Performance of Buildings Directive (EPBD) which sets the objective of reducing the average primary energy use of residential buildings by 16% by 2030 and 20-22% by 2035, mostly through the renovations of the worst-performing buildings. For instance, authorities could follow the example of other countries, such as the Netherlands or France, where certifications have become mandatory for all properties in multi-family buildings already from January 2023. To alleviate the burden on vulnerable households for the acquisition of EPCs (estimated to be about EUR 300 per housing unit), financial support such as grants or loans at favourable conditions could be provided. Renovations of worst-performing houses can be incentivised by excluding the possibility of renting apartments of the worst category, as done in France from 2023 onwards. However, this should be done in conjunction with efforts to promote the expansion of the rental market (see above).

Given the long average lifespan of new homes, setting regulations in terms of building standards for new dwellings is crucial for the decarbonisation of the housing stock. In line with the EU EPBD Directive, since January 2021 all newly constructed residential buildings in Slovakia are required to meet the criteria for nearly zero-emission buildings (nZEB). This implies that all new buildings should have effective thermal protection and energy should be generated from renewable sources to the extent possible. The updated EU EPBD proposal further tightens these criteria and sets the goal of constructing zero emission buildings (ZEB) from 2030. To accelerate the process, Slovakia could consider requiring all new buildings to be ZEB even before 2030. This, however, should be done in line with efforts to boost eco-innovation in the construction sector to maximise cost-effectiveness.

Natural gas and solid fuels, such as coal, wood, or waste, are still the most widely used energy sources for housing heating, and there are still 34 000 coal-fired households in Slovakia. This contributes to high air pollution and CO_2 emissions (see above). The authorities could consider placing a ban on fossil fuel equipment, such as fossil fuel boilers, in combination with enhanced support measures for installing energy-efficient heating devices relying on renewable energy (e.g., heat pumps, solar collectors, photovoltaic panels). A welcome step in this direction has been recently taken by stopping subsidises for the installation of gas boilers, while supporting the installation of heat pumps and solar panels. The modernisation and scaling up of the district heating system, in conjunction with efforts to move to large capacity electric heat pumps, also has great potential to decarbonise the building sector (Box 2.8).

Slovakia has many years of experience in funding buildings renovations to improve the energy efficiency of dwellings. The low quality of the housing stock inherited from the large-scale constructions during the communist era have required several waves of renovations. The first renovation wave took place in the early 1990s, and since 1996 support has been provided to improve thermal insulation of residential buildings. Subsidies and loans at favourable conditions from the SHDF have been provided to households to undertake renovations since the early 2000s. Consequently, as of December 2019, 68% of apartments

in multi-apartment buildings and 45% of single-family houses had been renovated at least once partially. This has positively contributed to the reduction in energy intensity in the residential sector between 2000 and 2018 (Figure 2.7, Panel B). However, a large part of already renovated dwellings will need to undergo further and more substantial renovations to meet the new standards in place since 2020.

Box 2.8. Decarbonising the building sector through district heating

District heating systems, i.e., systems that generate heat in a centralised location and then distribute it to residential buildings, businesses and industry in a local area, have great potential to decarbonise the building sector. Modern district heating networks with low operating temperatures can effectively integrate up to 100% of renewable sources to supply energy efficient buildings. Additionally, compared to individual heating systems, district heating systems benefit from economies of scale, which result in lower production costs. This implies that when transitioning to renewable energy sources, upfront investment costs and CO_2 abatement costs are reduced (Hoeller et al., 2023[77]).

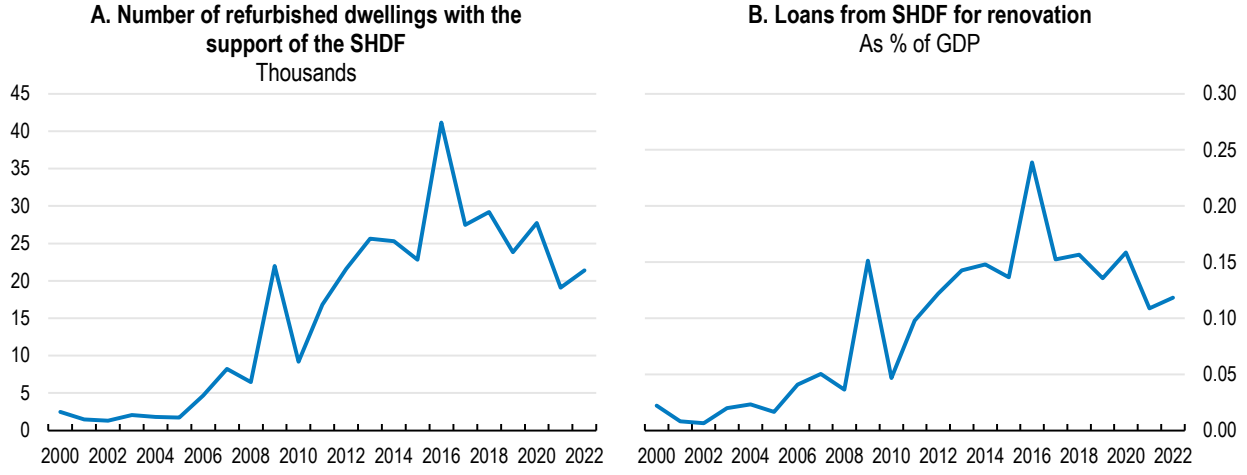
Slovakia would largely benefit from improving the technology and infrastructure of its district heating system and expanding connections to residential buildings. The Slovak district heating system is one of the most developed in Europe, and it currently supplies more than one-third of dwellings in multi-apartment buildings (Statistical Office of the SR, 2021[80]). District heating networks were first introduced in Slovakia during the communist era to supply large parts of the population with a stable heat supply. However, over time the district heating market has lost customers to individual heating solutions, mainly natural gas boilers, and the old and inefficient infrastructure has not been adapted to the fall in demand, producing heat at excess capacity. Natural gas accounts for nearly half of the total district heating generation, followed by coal (IEA, 2018[81]). The share of renewable energy sources in heat production in district heating systems increased over time, but is still low, representing 18.9% in 2019 and is mostly dominated by biomass, which can have negative effects on local air pollution, and could run counter the land use/land use change and forestry sector (LULUCF) goals (see *Chapter 1*) (Ministry of Economy, 2021[82]).

The modernisation and scale up of the district heating system in Slovakia are objectives of the Integrated National Energy and Climate Plan for 2021 to 2030 (INECP). In 2021, the European Commission approved, under EU State aid rules, financial support for the production of electricity from high-efficiency cogeneration installations connected to district heating networks in the amount of EUR 1 050 million for a maximum period of 15 years. In May 2023, a bill to amend the “Act on Heating” to encourage the use of renewable heat sources, including geothermal energy, through the administrative simplification of building permits for heating infrastructure passed the first reading in Parliament.

Leveraging successful examples from other OECD countries can support the effective implementation of these measures. In Denmark, for instance, around 65% of homes are connected to district heating, one of the highest district heating penetration rates in the world. One element of success of the Danish district heating system is its locally customised energy and heating systems achieved through strategic urban energy structure planning (zoning). According to this process, municipalities identify the most efficient and cost-effective heat supplies in urban and suburban areas and define the geographical zones or boundaries for both the natural gas networks and district heating networks. This practice ensures that heat generated in areas with large plants and incinerators is efficiently supplied through the local district heating system (OECD, 2023[83]). However, Denmark heavily depends on biomass (wood) for district heating, raising concerns about its adverse impacts on air quality, land use, and biodiversity. In light of these issues, the recent OECD Economic Survey advises a transition towards utilising large-capacity electric heat pumps (OECD, 2021[84]).

Long-term loans at favourable conditions from the SHDF should remain the main instrument for financing housing retrofits. Renovations require high upfront investments. However, a private credit market for housing renovations is still not well developed (Hoeller et al., 2023[77]). State-guaranteed loans covering up to 100% of the investment costs fill this gap. Operating as a revolving fund (see above), the SHDF is now almost totally financed by its own resources, reducing the burden on the state budget. Projects funded by loans from the SHDF target multi-apartment buildings or family houses which have been in use for at least 10-years and are subject to achieving at least 35% in energy savings. Such projects are conditioned to technical ex ante and ex post evaluations, which increase the potential effectiveness of the renovations in terms of energy savings. The number of refurbished apartments financed through loans from the SHDF has been decreasing since 2016 (Figure 2.25). To address this issue, the authorities should make sure that funding from the SHDF continues to be adequately provided to support large scale renovations. However, this decline may also reflect a slowdown in the demand for such loans, possibly because households might have already undergone renovations in the past and may be reluctant to go through the process again. Furthermore, challenges related to coordination issues in multi-apartment buildings, a lack of awareness of available financing support and inefficiencies in the renovation process might be hindering the uptake of SHDF loans.

Figure 2.25. The number of refurbished dwellings with the support of SHDF loans is decreasing



Note: SHDF stands for State Housing Development Fund.
Source: Ministry of Transport of the Slovak Republic.

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Grants should complement loans, especially for low-income households. Currently, EU-funded grants can cover up to 50% of eligible costs for installing energy-efficient heating devices relying on renewable energy (e.g., heat pumps, solar collectors, photovoltaic panels). This is welcome, especially as increasing carbon prices will strongly affect households heating with coal (34 000 households) and raises the risk of a shift towards wood heating, jeopardising air pollution goals. Moreover, there are grants funded from the EU Recovery and Resilience facility covering up to 50% of the costs for large-scale renovations of single-family houses. Initially, the take-up of the grants was limited. Stakeholders reported administrative complexities and lack of resources for many households to cover the initial 50% of costs. However, the latest call in October 2023 attracted a much larger proportion of households thanks to simplification of the administrative procedures. Furthermore, the REPowerEU plan aims to streamline administrative procedures and increase grants for vulnerable households to fully cover eligible renovation costs. To accelerate renovations the authorities could also consider covering a higher share of the renovation costs for the most vulnerable, but still financing the rest of the expenses through loans from the SHDF. This approach would ensure that households have a financial stake in the project and incentivise behaviours that seek to minimise energy consumption.

Financial support for housing renovations can have high costs per tonne of CO_2 abated. Therefore, subsidies should first target the most energy-inefficient dwellings, and renovation schemes should be assessed ex-ante and ex-post by independent energy performance experts (Hoeller et al., 2023[77]; OECD, 2023[76]). This is already the case for renovation projects funded by loans from the SHDF. In addition, there are plans to condition government support for renovations on achieved energy savings by using information from gas and electricity meters. Improvement in data collection about the energy efficiency of the housing stock, for example through the extension of coverage of EPCs, is needed to better target the worst performing dwellings. The recently submitted RePowerEU plan assigns EUR 30 million to the creation of a unified database on energy performance of all buildings by 2026, which will contain information on EPCs, updates on the status of building renovations, reports from inspections of heating and cooling systems, data on renewable energy sources. This is a welcome step, and its implementation should be expedited.

Additionally, renovation grants could be better targeted at the most vulnerable households living in the most energy-inefficient dwellings. Untargeted grants face the risk of disproportionately benefitting middle and high-income households, and funding renovation works that would have been undertaken even in the absence of support (Nauleau, 2014[85]; Brugnara and Ricciardi, 2021[86]). To limit this risk the authorities should take into account both the energy performance of the buildings and households' income. For example, since 2022 in France grants from the programme "*Ma Prime Renov*" have been subject to means testing and have been contingent on the energy savings generated by the renovation works. A multi-dimensional and operational definition of household at risk of energy poverty is under preparation to better identify potential beneficiaries of renovation grants. However, there is the need to strengthen data collection and allowing linking databases containing different sources of information on households' income and energy efficiency of single housing units, as for example was done in Denmark, to improve targeting of renovation grants (see *Chapter 1*).

Relaxing voting rules could accelerate the pace of renovations in multi-apartment buildings. As in other OECD countries, a two-third majority of the owners is needed to agree to undertake renovations in multi-apartment buildings. This is often difficult to achieve, as some homeowners may not have the resources to cover the costs, while others may not want to deal with the discomfort of living in a building going through renovation works. Population ageing also poses issues, as older people may have less incentives and capacity to take up loans for renovation purposes (Ministry of Transport and Construction, 2020[78]). Therefore, the authorities could consider relaxing the voting requirement as was done in Austria, for example, where the requirement of obtaining a two-thirds majority was recently relaxed to a simple majority (Hoeller et al., 2023[77]). This should however be done in conjunction with efforts to support households that cannot afford paying for renovations, using a combination of loans at favourable conditions and grants, in addition to policies that enhance public awareness about the benefits of energy efficiency upgrades (see below).

Improving the efficiency of the renovation process can also boost building renovations. Large-scale energy efficiency renovations often involve coordination among multiple specialised contractors, and delays at any stage can lead to additional costs. Some countries, like Latvia and Estonia, are testing the use of prefabricated multifunctional renovation elements to expedite the process and minimise disruption for occupants making renovations more appealing to owners (Box 2.9). Additionally, the Netherlands has implemented a programme that enhances coordination among various renovation steps, reducing the total time for net-zero renovations of social housing to just 10 days (OECD, 2023[42]). Fast renovations can also diminish discomfort related to the works. Moreover, improving the administrative process of obtaining permissions for renovation works is crucial. To do so, the authorities could establish a one-stop-shop or a single contact point in the public administration (see discussions about building permits procedures above).

Energy efficiency measures should be accompanied by policies that incentivise behavioural changes. Energy efficiency measures can lead to rebound effects. For example, given the expected savings in

energy costs, households might use energy efficient appliances more frequently or for longer durations, offsetting some of the energy savings (Allcott and Greenstone, 2012[87]; Gerarden, Newell and Stavins, 2017[88]; Levinson, 2016[89]; Hoeller et al., 2023[77]). Carbon pricing is the most effective way to encourage behavioural changes to promote energy savings. However, to enhance effectiveness, it could be complemented by initiatives that raise households' awareness by directly confronting them with their individual consumption (Font Vivanco, Kemp and van der Voet, 2016[90]). This can be done, for example, by incentivising adoption of technologies that provide real-time feedback on electricity consumption, prices, and expenditures, such as smart meters. According to the literature, smart meters can reduce energy consumption by approximately 5–15% and water consumption by 17% (Font Vivanco, Kemp and van der Voet, 2016[90]). Redesigning energy bills by stressing comparison in energy consumption with neighbours, has been proven effective in increasing households' energy savings by up to 2.55% in 27 states in the US (Jachimowicz et al., 2018[91]; Papa and Cavassini, 2023[92]).

Enhancing public awareness about the benefits of energy efficiency upgrades can help accelerate the pace of large-scale renovations. Some households may not be aware of the insulation of their home, the potential financial benefits of renovations, and the existence of support programmes. Lack of information may be a particular problem for older homeowners and in rural areas. Public campaigns can help increase awareness and take up of support measures. The Ministry of Transport regularly organises conferences to inform citizens and managers of buildings about legislative changes, new technologies, products, and innovative processes in the construction industry. Such activities are welcome, and their effectiveness in terms of accelerating renovation works could be evaluated. For example, in Latvia, the "Let's live warmer!" (*Dzīvo siltāk!*) programme, which included various activities (e.g., seminars, workshops, public discussions, and publications at national, regional, and local levels) to inform citizens about the benefits of carrying out renovation projects resulted in a significant increase in the number of renovation applications. Applications for the improvement of heat insulation of multi-apartment buildings programme quadrupled from 2009 (prior to the campaign) to 2011 (OECD, 2023[42]).

Box 2.9. Increasing efficiency of deep residential renovations: the More-Connect pilots in Estonia and Latvia

Estonia and Latvia have developed pilot projects to test more efficient ways to undertake deep residential renovation by using prefabricated multifunctional renovation elements. This pilot is part of the development of the integrated design of nearly Zero Energy Buildings (nZEB), funded by the European Union's H2020 framework programme for research and innovation. Projects generally include thermal insulation, high-performance window installation, insulation of the roof, mechanical ventilation, a heat pump for hot water use and heating, and photovoltaic panels for electricity generation.

In Tallinn (Estonia), a pilot project successfully modernised a typical five-story multi-apartment building in using prefabricated large concrete panel elements. In Latvia, another pilot project focused on the deep renovation of a silicate brick building constructed in 1967, which was a commonly used building style in rural areas and smaller cities across the country during the 1950-1960s. The Baltic cases are relevant to the Slovak Republic, where a significant portion of the housing stock consists of multi-apartment buildings built before 1993 and predominantly made of brick.

Initial findings suggest that modular renovations can provide an efficient alternative to traditional deep renovation in both urban and rural areas. Using prefabricated renovation elements is particularly convenient as it offers a one-stop-shop solution for production and a single point of contact for end-users. Apartment owners can rely on one party who is responsible for all stages of the renovation, from initial planning, inventory of specific demands, adherence to building codes, translation into modular renovation kits, installation of the modules, to financing and aftercare, simplifying procedures and accelerating the process.

Source: (OECD, 2023[42])

Table 2.3. Policy recommendations for addressing housing market challenges

MAIN POLICY FINDINGS	RECOMMENDATIONS (Key recommendations in bold)
Boosting the efficiency of the housing market	
Land use policy is currently highly decentralised and fragmented. This leads to inefficiencies in the management of resources, challenges in hiring qualified staff for construction-related tasks, and an increased risk of policy capture by local stakeholders, resulting in blockages of construction projects at municipal level.	Give more responsibilities to higher levels of government in land use policy and construction-related activities to facilitate construction projects. Promote coordination across different ministries and bodies with overlapping responsibilities of housing policy to avoid conflicting policies or regulations.
Limited digital adoption slows the administrative process for building permits. Lack of national enforceable statutory deadlines in building permit procedures results in the proliferation of unauthorised buildings and high perceived corruption.	**Accelerate the adoption of digital tools in building permits procedures, including by introducing digital platforms as one-stop shops.** Introduce national statutory deadlines in building permits procedures, after which applicants automatically receive project approval or the decision is referred to a higher instance.
Standard indefinite rental contracts have become rare given the high level of tenant protection they afford, and most new contracts are subject to the Short-Term Act with little protection to the tenant.	**Amend rental regulations to better balance the interests of landlords and tenants**, Make provision for a rental contract with flexible renewal possibilities; the obligation for tenants to pay a security deposit; specified reasons to evict the tenant, with adequate notice period; without the obligation for landlords to find replacement housing for evicted tenants; and without the requirement to pass the tenancy to the heirs.
The tax system favours owner-occupied housing over rentals. The justification for allowing the deductibility of mortgage interest payments on owner-occupied housing is limited as imputed rents are untaxed.	Gradually phase out mortgage interest relief for homeowners.
Capital gains on the sale of the property are tax exempted, undermining incentives for investing in other productive projects by creating a preferential treatment for investing in homeownership.	Phase out tax exemptions on capital gains from the sale of the property.
Recurrent taxes on immovable property are low. Their design, which bases recurrent taxes on immovable property on the area of the property, harms efficiency and equity.	**Change the base for recurrent taxes on immovable property from area-based to regularly updated market values**. Introduce options to protect the most vulnerable property owners, such as tax deferrals or payments in instalments.
Enhancing housing inclusiveness	
The social housing stock is inadequate and public spending on the construction of social rental housing is low. Some eligibility conditions set by municipalities for households to access this sector are too strict, excluding many households in need.	**Set clear targets for social housing units with portable eligibility rights in collaboration with municipalities and ensure adequate funding from the central and municipal budgets for their construction and operation.** Relax excessively stringent eligibility conditions set by municipalities for access to social housing and regularly review eligibility criteria based on income and social conditions
Many Roma live in informal settlements without legal title to the land, which prevents them from accessing basic infrastructures (e.g., access to electricity, drinkable water) and often results in forced evictions and homelessness. Many Roma families are unable to access state support, like housing allowances, which demand proof of dwelling ownership or lawful occupancy.	**Accelerate the formalisation of property rights in Roma settlements,** including by legalising the land where houses were already built, and providing municipalities and Roma families with expert legal counselling for the necessary administrative processes.
Homelessness data are collected only every ten years. Most of the actions to address homelessness have been confined to the local level.	Conduct more regular data collection on homelessness at the national level to identify needs and coordinate the implementation of the action plan with municipalities.
Improving the energy efficiency of the housing stock	
The revision of the EU Energy Performance of Buildings Directive aims for higher quality and comparability of Energy Performance Certificates, and targets to reduce the average primary energy use of residential buildings by 16% mainly through renovations of the worst-performing units by 2030.	**Extend coverage of energy performance certificates and incentivise renovations of worst-performing dwellings before 2030,** for example by excluding the possibility of renting them.
Financial support for housing renovations can have high costs per ton of CO_2 abated. Untargeted renovation grants could disproportionally benefit higher-income households and fund renovation works that would have been undertaken even in absence of the support.	**Target renovation grants to low-income households living in the most energy inefficient dwellings.**
Coordination issues in buildings with several apartments and limited homeowner awareness regarding the quality of insulation in their homes lead to weak demand for support measures and can result in underinvestment in housing renovations.	Relax voting rules to accelerate the pace of renovation in multi-apartment buildings. Scale up effective awareness campaigns about the benefits of energy efficiency upgrades.

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SLOVAK REPUBLIC

The Slovak economy has been relatively resilient to the energy crisis, but growth has slowed amid high inflation, weakening foreign demand and tightening financial conditions. The pandemic and the energy crisis have deteriorated public finances; steady fiscal consolidation is now needed to rebuild fiscal buffers and improve long-term fiscal sustainability in the face of rapid population ageing. Sustaining economic convergence and facilitating inclusive structural change requires improving skill provision at all stages of the learning cycle, fostering the domestic innovation capacity and improving the business environment. A more consistent pricing of carbon across the economy and stronger incentives for green investment and innovation would make growth more sustainable. Improving housing affordability requires structural reforms to improve the efficiency of the housing market, property tax reforms, and targeted support to vulnerable households. Incentives for housing renovation must be strengthened to address energy poverty and achieve environmental goals.

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